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ABSTRACT

The documentation of collection conservation treatments and program management information compiled in this publication are the result of the "Training the Trainers" conference in April 1992 at the University of California, Berkeley. Only treatments appropriate for general, usually circulating, collections have been included, emphasizing low unit cost, high productivity and preservation of information rather than the conservation of artifacts. Treatment documentation for the following are included: conservation laboratory management; book structures and basic working methods; treatment decision making; pockets; protective enclosures; pamphlet binding; reinforcement of paperback bindings; photocopying replacement pages; paper repair; tightening hinges and hinge repair; tipping in and hinging in; textbook consolidation; spine lining and hollow spine lining; rebacking and case repair; recasing (including replacement of endsheets); and case replacement (including textblock consolidation and replacement of endsheets). A selected bibliography of six manuals comprising the core literature for collection conservation treatment is included; and the report on the "Training the Trainers" conference is appended. (JLB)

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COLLECTION CONSERVATION TREATMENT

A Resource Manual for Program Development
and
Conservation Technician Training,

including

"Report on Training the Trainers:
A Conference on Training
in Collection Conservation,
April 28 – May 2, 1992"

COMPILED BY MARALYN JONES

IR054965

Conservation Department
The Library
University of California, Berkeley
1993

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Introduction

Treatment Documentation

1 Conservation Laboratory Management 7
2 Book Structures and Basic Working Methods 81
3 Treatment Decision Making 103
4 Pockets 123
5 Protective Enclosures 135
6 Pamphlet Binding 189
7 Reinforcement of Paperback Bindings 213
8 Photocopying Replacement Pages 229
9 Paper Repair 245
10 Tightening Hinges and Hinge Repairs 263
11 Tipping In and Hinging In 279
12 Textblock Consolidation 299
13 Spine Lining and Hollow Spine Lining 313
14 Rebacking and Case Repair 329
15 Recasing (Including Replacement of Endsheets) 359
16 Case Replacement (Including Textblock Consolidation and Replacement of Endsheets) 401

Selected Bibliography

Report on "Training the Trainers"

A conference on Training in Collection Conservation,
UC Berkeley, April 28 – May 2, 1992

Introduction

The documentation of collection conservation treatments and program management information compiled in this publication are the brainchildren of a group of forty-two collection conservators and preservation administrators who attended the "Training the Trainers" conference in April 1992 at the University of California, Berkeley.

The conference had three goals: to develop plans and documentation for in-service training of conservation technicians, to outline grant proposals to fund regional training projects, and to discuss the professional development needs of collection conservators. (For more information about "Training the Trainers" see Chapter IV in this manual, the final report on the conference.) To accomplish these goals required building consensus in a very short time among a large group of practitioners. With hard work on the part of all participants, the conference goals were accomplished, including the publication of this resource manual of treatment instructions prepared for use in the regional technician training sessions.

The Documentation

The treatment instructions and supporting documentation in this manual were not written for the purpose. In advance of the meeting, collection conservators from participating institutions were requested to send any written instructions for collection conservation treatments used at their institutions. The instructions received were organized by topic and comments were solicited at the conference from each collection conservator. Once at Berkeley, conservators were assigned to task forces that reviewed several topics and decided, incorporating the comments from the whole group, which instructions were to be retained for publication in the resource manual. The task forces also recommended some reorganization of the topics and some additional information that would complement documentation in hand.

The organization of the treatments has been changed as recommended. However, in order to maintain the timeliness of the publication the documentation has been retained in the form provided (leading to a few instances where legibility may be difficult), and, while no material was commissioned specifically for the manual, some additional documentation that was provided on a voluntary basis and within production deadlines, has been included. A number of documents have been edited by their authors, based on comments received during the conference. Otherwise the material has not been changed. The instructions should be considered working documents, snapshots of techniques used in 1992; as treatment techniques evolve at the originating institutions this documentation may become dated.

Only treatments appropriate for general, usually circulating, collections have been included, emphasizing low unit cost, high productivity and the preservation of information rather than conservation of artifacts. In addition to instructions, considerable supporting material has been included, such as information on furnishing a treatment laboratory, treatment specification and decision trees, inventory control methods and workflow descriptions. Collection conservators with experience teaching novice conservation technicians reported that providing information about efficient program management can help technicians increase productivity and make better treatment decisions, to improve overall effectiveness of the collection conservation program.

The reader will notice some redundancy in the documentation. Multiple versions of treatments, many quite similar, have been included for several reasons. First, they represent the variations possible on a single theme, illustrating the development of new ideas. Second, they demonstrate the real variety of practice required in different institutional contexts. Third, the different instructions exemplify different styles of presentation of similar information. They may assist collection conservators to develop better documentation for treatments in their own institutions.

The reader may also observe gaps in the documentation. In several areas where insufficient breadth of documentation was available the decision was made to eliminate the topic, rather than to provide an unbalanced representation of practice.

Many institutions rely on published manuals to document their collection conservation treatments and to train their staff, and several participants submitted reprints from the more popular manuals to the conference. In lieu of reprinting from published works, a brief bibliography of the standard treatment manuals has been included.

1

Conservation Laboratory Management

The section contains samples of several kinds of documentation used in the management of collection conservation programs, such as individual and aggregate production statistics, workflow outlines, laboratory floorplans and drawings of custom furniture. In addition, several lists of hand tools and supplies used in collection conservation are included.

Statistics forms document the need for productivity in collection conservation. Since the whole collection is the object to be treated, the greater the volume of work the more effective the program in meeting the needs of the collection. Sample floorplans illustrate how efficient layout of workstations can streamline the workflow of materials through the lab. Workflow outlines show the need for systems to track items through the preservation system to prevent misrouting and to permit retrieval of individual items on demand.

Conservation Laboratory Management

Library Collection Conservation - BookLab, Inc.

Systems for Inventory Control of Circulation Collections - Columbia

Conservation Treatment: General Guidelines in Processing Procedures - Cornell

Retrieval Path for Materials in Process - Cornell

The Prep Steps (Inventory Control Method) - BookLab, Inc.

Book Repairs Work Flow - Emory

Conservation Monthly Statistics Form - Columbia

Monthly Statistics Forms - Berkeley

Statistics Forms - Northwestern

Laboratory Floorplan and Equipment List - Northwestern

Floor Plan Conservation Lab and Lab Furniture Plans - Emory

Laboratory Equipment and Furniture List - San Francisco Public Library

Conservation Lab: Layout and Lab Furniture Plans - Columbia

Basic Bench Set Up for Conservation Technicians - Berkeley

Individual Supplies Inventory - Emory

Homemade Book Press - Cincinnati

Materials Used in Books - Cincinnati

Covering Materials - Cincinnati

Adhesives - Cincinnati

Care of Tools and Equipment - Cincinnati

8

BookLab Floor Plan

1992

Key to Preservation Photocopy Work Stations

A. Check-in, preparation and cutting

B. Printing, (5) Sharp 8870, (Canon CLC500, Xerox 5080 off-site)

C. Collation

D. Foldouts, pockets, music formats

E. Double fan binding

F. Backing and lining

G. Trimming

H. Cloth and board cutting for covers

I. Cover making

J. Casing in

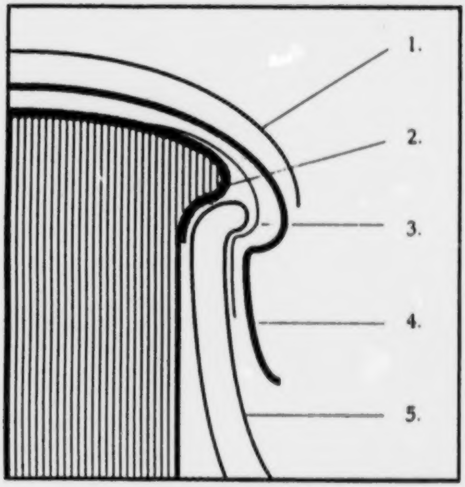
K. Labeling or stamping and inspection

L. Shrink wrap for originals, shipping

TTT Conference Berkeley
28 April - 2 May, 1992

draft, BookNote #14
Library Collection Conservation

BookLab, Austin, TX



1. paper back lining 2. pasted and brush stippled kozo fiber paper lining 3. kozo fiber paper guard tipped to the endpaper and bonded to the back of the text 4. tightly woven cambric bonded with PVA adhesive 5. single folio endpaper

Endpaper attachment used in production CMR work

BookLab, 3.92

Book Lab

draft, 4.92/BkNt#14

CHANGES IN LIBRARY CONSERVATION

Library conservation treatment is linked to the evolving destiny of paper collections. As paper collections assume the role of accessories to technologies of conversion, transmission and duplication, treatment techniques for both rare and general collections will adapt. While rare item treatments will be oriented toward exhibition and preservation, general collection treatments will take on a technological and industrial character as materials are prepared for use in automated access systems.

LIBRARY COLLECTION CONSERVATION

Collection conservation will define itself. As volume increases, treatment specifications will be standardized, treatment documentation automated and scheduling introduced into data management. The work stations will be identified, their capacities established and staff and equipment integrated into a continuous flow of production. Finally the work itself will take on a challenging industrial character as the sophistication and speed needed for high production hand work is fully appreciated.

Standards

"Book repair and reinforcement methods for use on circulating books should provide for (1) text consolidation or reinforcement of leaf attachment, (2) reinforcement of the cover-to-text attachment, and (3) toughening (or replacement) of the cover. All three types of reinforcement must be present in a good collection maintenance repair. Repairing the cover is of little value if the text is going to fall out of its case, or if pages are dropping out from a break in the textblock. It is also important that the reinforcements be made without causing subsequent damage to the action of the text leaves." [BookLab BookNote #3]

Guidelines such as these begin to provide a standard for collection maintenance repair. The standard treatment is then applied routinely to each book regardless of its individual condition. Books not suitable for CMR are identified and removed from the production stream.

Documentation and Unit Cost

Documentation of treatment, as required in all conservation work, is well provided in collection conservation work. However, the documentation refers to the standard treatment specification: its steps, materials and working methods. This approach is warranted as the documented procedure is applied to every book.

Another form of documentation used in collection treatment is item tracking. A tracking system, manual or automated, details special features of the item and additional steps taken in treatment. It may also track unit costs and turnaround periods, useful data for preservation planning.

Management of Work

Management of collection conservation involves the education of selectors, preparation of work to assure an appropriate and clear treatment decision, attention to handling of exceptional items, resolution of questions which can be anticipated in production, quality control and inspection, and follow up after delivery of the completed work. The manager must also know the capacity of the facility and the schedule of work underway. Various systems, both automated and manual, assist the manager and help in setting production goals.

Identification of Work Stations

Regardless of the size of the collection conservation facility, the establishment of dedicated workstations, as opposed to individual work benches, signals the transition from item to collection treatment. Each work station is equipped and supplied for efficiency. The route from station to station is sequential and the work is transported on carts.

Lab

Staff learn the process of collection conservation by learning the individual work station skills. Standards are quick to emerge as the work at each station is refined. As everyone learns all the stations, "swing" flexibility is created. The group can team up quickly at congestion points.

Quality of Work

The sensitivities of touch and accuracy and the powers of judgement needed for collection conservation are no less acute than those used in item treatment. Repeated practice and a speedy pace refine the skills of the collection conservator. The uniformity of the work can lead to either a high or low standard, depending on goals. A high goal means some work will not pass inspection, either at the work station or before delivery. The incentive then is refinement of technique and error free performance.

CURRENT ISSUES, COLLECTION CONSERVATION

Paper as the Archival Medium

In a reversal of perspective, paper is now considered an archival medium. Until recently the preservation perspective has focused on the impermanence of paper records. In contrast to short lived electronic or film-based record media, paper now seems more stable. Developments in remote storage, image capture techniques, and conversion, transmission and duplication technologies suggest that paper records, regardless of their condition, are the basic archival medium. Adaptable, eye readable, paper is also increasingly machine accessible.

As the paper collections are identified as "leaf master" sources, to be stored for use as retrievable and electronically convertible originals, conservation treatment will be designed to enable future replication of copies by way of a spectrum of technologies.

Integration of Direct Treatment and Preservation Duplication

"I think it's likely in most preservation departments, as they grow and mature....that preservation photocopying will be done by conservation staff...., and that there will be a separate unit for preparing materials for preservation microfilming." [Jan Merrill-Oldham]

As the balance of work in a preservation program shifts from treatment of originals to management of originals for purposes of duplication, the relationship of the original to its copies will become a central theme of collection conservation. Preferred treatments will preserve the originals and foresee the discard of copies, not the other way around.

Diversified Service Base

The collections conservator must be able to integrate services, both within and outside the library staff, that are capable of producing conservation quality products. All materials should flow through the conservation conservator's station for routing to the departments or facilities where repairs or duplication will be performed. Thus all decisions can take place within the conservation office, and a unified policy and rationale for care of library materials can be followed.

Preservation Role of Other Library Departments

"There is no value to being able to make the little decisions ("How should this book be repaired?"), if the bigger decisions are flubbed ("How much time should we spend on which collections, in which order, at what level, and why?")." [Jan Merrill-Oldham]

The collections conservator must understand and empathize with the daily work done in other departments. This is not just a person thoroughly trained in hands-on conservation techniques. The collections conservator should be one well educated in librarianship and in the comprehensive operation of the particular institution--knowledgeable in the selection, acquisition, accession, and use of materials specific to that library.

Many preservation goals can be accomplished as a byproduct of the routine work assigned to other library departments. The aim should be not to foster an island of conservation in a sea of library work, but gradually to disperse conservation effort throughout the library. Such a preservation program would prosper as it disappears.

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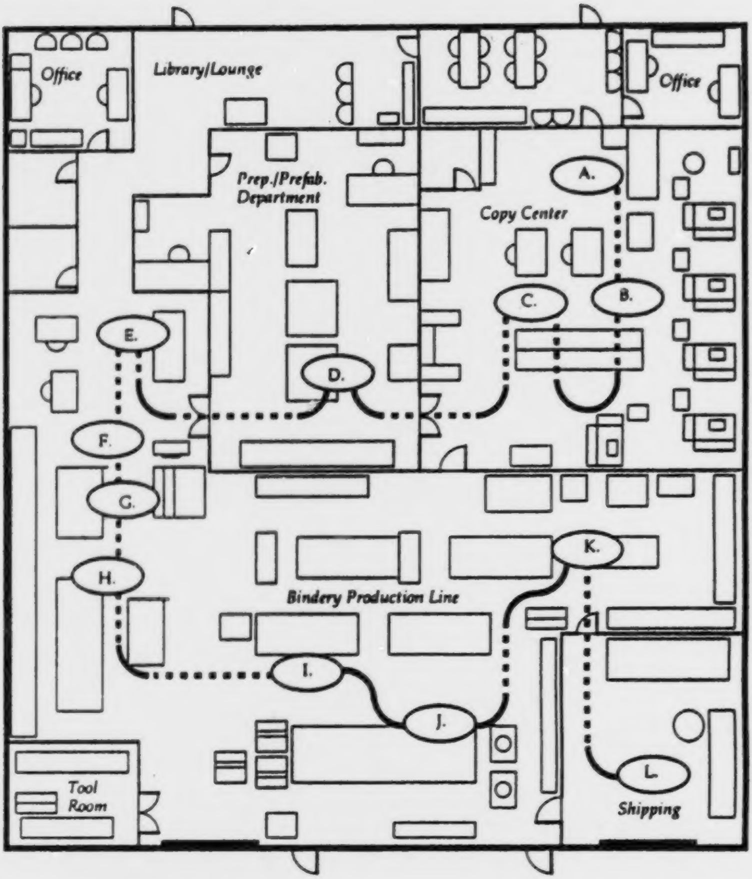

Office
Library/Lounge
Office
Prep./Prefab. Department
Copy Center
A.
B.
C.
D.
E.
F.
G.
H.
I.
J.
K.
L.
Bindery Production Line
Tool Room
Shipping

BookLab
BASIC FLOOR PLAN
1991

work stations for bound
preservation photocopy

AVAILABLE

Columbia University Libraries
Conservation Lab

Systems for Inventory Control of Circulation Collections

Library materials at Columbia are basically divided into two parts; Rare, and Circulating Collections. Whereas the former are paged, the later are generally accessible through open stacks.

The binding, repair and conservation of Circulating materials is dealt with in the following way: all items needing binding and or repair, are accompanied by a binding slip. These slips record the type of operation needed, the work done, and act as a circulation record.

For commercial binding two types of binding slips are used, a **'Computer Binding Slip'** which records work done on serials, either by the Bridgeport National Bindery, or Ocker & Trapp Library Binding Inc. Ocker & Trapp also receive a **'CUL Binding Slip'** for all work on monographs, rebindings and providing preservation cases. Each slip is made up of four parts. The back copy is retained by the library unit as a circulation record. The pink and yellow copies (the two middle ones), are kept by the Binder, and the top copy, which remains with the book until the work is finished, is returned by Binder to Materials Processing; who have responsibility for handling all commercial binding operations. It then passes, with the finished book back to the Library unit it belongs to.

The **'CUL Binding Slip'** is also used for materials sent to the Conservation Lab. As above, the back copy is retained by the Library unit, with the top copy remaining in the Lab. The other two are returned with the finished item to facilitate clearing of circulation files. Materials selected for in-house treatment are: those which are imprinted prior to 1850; have paper that can survive three but not four single folds; or because of their particular characteristics, need delicate handling.

On receiving these items the Lab Supervisor for Circulating Materials checks the data on the binding slips, and groups each type of treatment. Once completed; the Technician signs the binding slip, records the work done, the date the item was reviewed and returned, and the time taken. After further checking, the items are either returned directly to the library unit , or sent to Materials Processing for labeling, etc.

At present the monthly, quarterly and annual lab statics are kept on the Lab computer using 'Excel 3.0.' spread sheets. A review of this system and work flow practices is planned for the New Year.

Cornell University

Department of Preservation
and Conservation,
701 John M. Olin Library
Ithaca, NY 14853-5301

Conservation Treatment: General Guidelines in Processing Procedures.

The following guidelines are designed to provide an overview of the way library materials pass through the conservation treatment operations and the basic rationale for decision-making.

Paperbacks. Paperbacks are unbound books consisting of a text block with leaves that are adhesive-bound or sewn into multiple sections wrapped with a paper cover. Thin or single-section paperbacks are, for the purposes of processing, termed pamphlets (see below). All paperbacks are delivered to the Commercial Binding Office where they are examined and directed to be stiffened in the Library or sent to our commercial binder. Generally, paperbacks are stiffened unless they are "multi-volumes" (i.e. on record as being part of a bound-together set, or having continuous pagination running through more than one volume), or have substantial structural problems.

Paperbacks awaiting stiffening are grouped in date order on book shelves in B40, and can generally be easily found and retrieved at this stage should this be necessary. The next step involves the sorting of groups of paperbacks into six size categories: (1) 19.5cm x 13cm, (2) 21cm x 14cm, (3(23cm x 15cm, (4) 15.5cm x 17cm, (5) 28cm x 21cm, (6) 33cm x 25cm. The books remain in the six size batches until the final trimming step.

After trimming, the books are delivered to Plating and Labeling. Normally, paperbacks are completely processed over a five-day period.

Exceptions to the normal stiffen process are those items that: have insertions (such as maps, charts, etc.), include other media (e.g. an audio tape or computer disc), are less than 1/4" in thickness or are made up of a single section. If a paperback has loose leaves,because of a poor quality publisher's binding, the cover is removed, the text-block double-fan adhesive bound, the cover replaced and stiffened.

Insertions. Maps or other similar loose materials will be placed in a simple pocket after the book is stiffened providing that they are thin enough (i.e. generally not more than three thicknesses of paper, depending upon the size and

Cornell

thickness of the book). If the map is too thick for a pocket because its insertion would result in structural weakness in the book, the unstiffened book and the map are encased together in an MM case. The cased materials are sent to Plating and Labeling to receive a call number label to the book and the case.

Similarly, a book with an accompanying audio tape, computer disc, or other non-book item, will be cased in a contour case designed to maintain the bibliographical unit at the shelf. The case and contents should be labeled by Plating and Labeling.

Pamphlets. As noted, the definition of a pamphlet by the Department is a paperback item less than 1/4" in thickness or a single-section (i.e. single folio) item. Pamphlets enter the Department for processing via the Commercial Binding Office along with other paperbacks, and are placed on the pamphlet shelf in date order. Processing involves placing the pamphlet in the appropriate size case (ensuring that the case height does affect the assigned size classification), and securing by glue tipping and stapling. Pamphlet case height sizes used for most pamphlets are: 35.5cm, 33.2cm, 30.6cm, 29.4cm, 25.6cm, 24.3cm, 23cm, 21.7cm, 20.4cm.

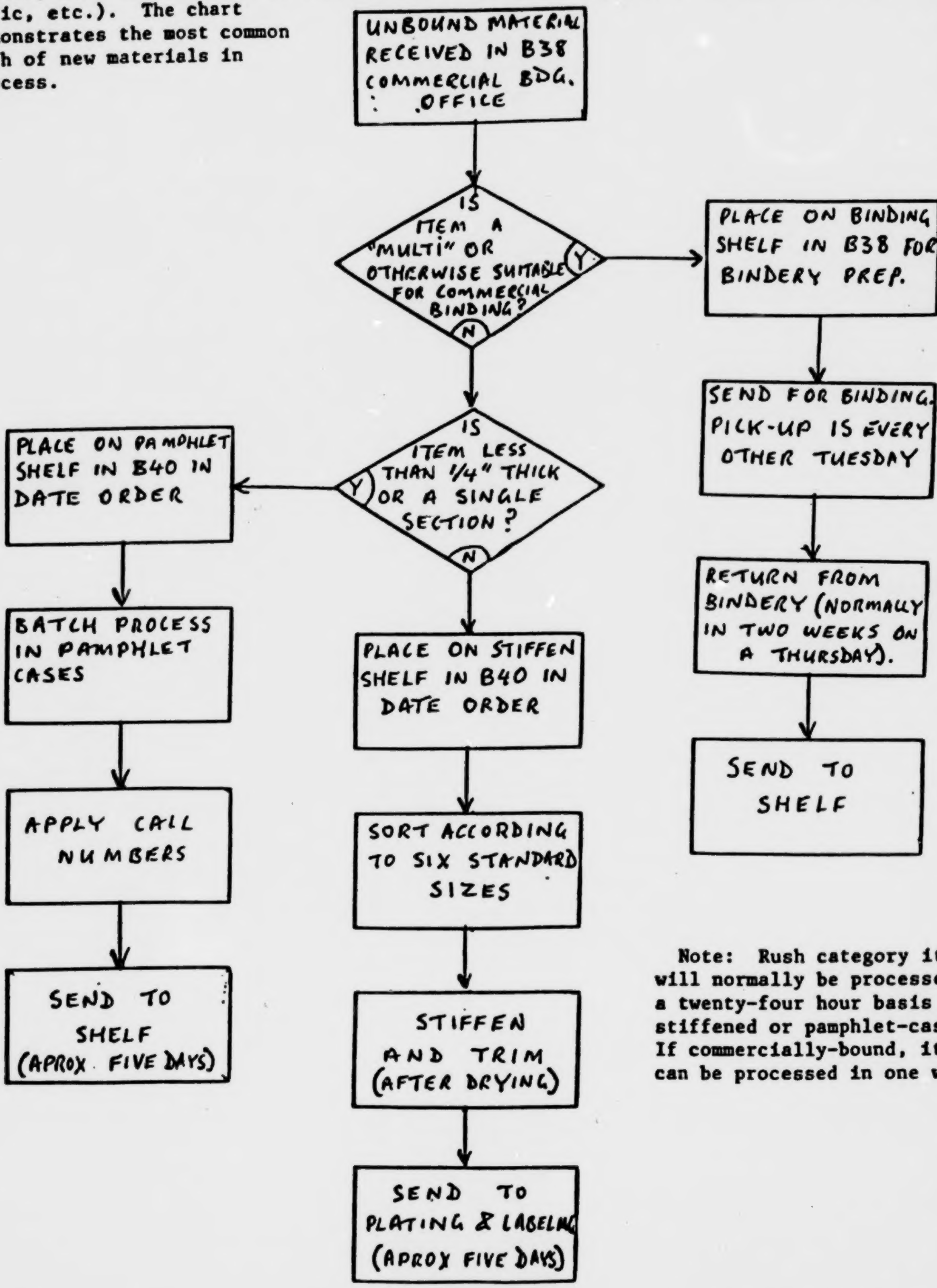
At the present time, the Department applies call numbers to pamphlet cases, but eventually Plating and Labeling should perform this task for consistency in work flow. Normal processing time for pamphlets is five days.

Rush Category Items. Normally, items flagged for priority treatment will be processed within a 24 hour period, providing that the items are delivered before noon. Because of the need to allow time for wet adhesives to dry, it is preferred that books be delivered the day after they are received. Although every effort is made to honor the 24 hour promise, chronic understaffing, particularly in the Stiffening Unit, sometimes cause delays beyond this point but only to a maximum of 48 hours. Rush items are delivered directly to Plating and Labeling and the priority category specifically identified. Some items designated "rush" are appropriate for commercial binding, but every effort will be made to process these materials within the Department. If commercial binding is unavoidable, the materials will be sent to the binder in a "rush" shipment and returned to the Library in one week. The Commercial Binding Office maintains full records of all materials sent for binding with separate shipment records for "rushes."

Cornell

RETRIEVAL PATH FOR MATERIALS IN PROCESS

Occasionally, materials in process need to be retrieved by Central Technical Services staff. The information most useful for retrieval purposes is: author/title, call number, size in centimetres, thickness (i.e. number of pages), destination (e.g. Wason, Music, etc.). The chart demonstrates the most common path of new materials in process.


UNBOUND MATERIAL RECEIVED IN B38 COMMERCIAL BDG. OFFICE
IS ITEM A "MULTI" OR OTHERWISE SUITABLE FOR COMMERCIAL BINDING?
Y
N
PLACE ON BINDING SHELF IN B38 FOR BINDERY PREP.
SEND FOR BINDING. PICK-UP IS EVERY OTHER TUESDAY
RETURN FROM BINDERY (NORMALLY IN TWO WEEKS ON A THURSDAY).
SEND TO SHELF
IS ITEM LESS THAN 1/4" THICK OR A SINGLE SECTION?
Y
N
PLACE ON PAMPHLET SHELF IN B40 IN DATE ORDER
BATCH PROCESS IN PAMPHLET CASES
APPLY CALL NUMBERS
SEND TO SHELF (APROX. FIVE DAYS)
PLACE ON STIFFEN SHELF IN B40 IN DATE ORDER
SORT ACCORDING TO SIX STANDARD SIZES
STIFFEN AND TRIM (AFTER DRYING)
SEND TO PLATING & LABELING (APROX FIVE DAYS)

Note: Rush category items will normally be processed on a twenty-four hour basis if stiffened or pamphlet-cased. If commercially-bound, items can be processed in one week.

BookLab Inc 1992

The Prep Steps

1.) Unpack the books from the boxes, saving styrofoam peanuts and bubble wrap.

2.) Note the total number of books and boxes on the **Shipment Summary** form. If the client did not provide a **Shipment Summary** form then complete one using the appropriate information. If the number of books does not equal the number the client noted, contact the client and notify them of any discrepancy. If the number of boxes differs, watch for the missing box to be delivered the following workday. If the missing box does not arrive the following workday, notify the library so they may initiate a trace.

3.) Note the date of receipt from the outside of each box in the special instruction box at the bottom of the **Shipment Summary** form. Also note the total weight of the original shipment. Each box should have its weight written on the outside.

4.) Read the **Shipment Summary** form and/or cover letter and make note of any special instructions such as "blanket" requests for item treatment, insurance, labeling, shipping and billing instructions, etc... Special requests for shipping, billing and insurance must be noted in the special instruction box on the **Shipment Summary** form. Blanket instructions for item treatment should be written onto each individual Treatment Flag or otherwise communicated to whomever the information pertains.

5.) Enter the client information on the **Job Calendar**, ie. institution, arrival date, batch color, shipment due date and number of originals. Do Not enter the number of copies yet.

6.) Note **Job Number** from **Job Calendar** and set stamper to that job number plus three zeros. (ie. Job #123, set stamper to 123000.)

7.) Stamp the **Item Number** on the lower right corner of the **Item Invoice** using color paper which matches the batch color. You will use the same number of **Item Invoices** as the number of books in the job. **Note:** If there are any items for which multiple copies are requested, additional **Item Invoices** must be made as each bound photocopy must have its own **Item Number**. Additional **Item Invoices** are also needed if an item has to be spilt into two volumes, ie. if an original book is more than 72mm thick (about 1200 pages), or if the client has requested the book to be split.

8.) Separate the original books into sets. (Sets might be designated by the client at the bottom of the **Treatment Flag**, ie. "Set, vol # 2 of 4 sent.") Note that any book which is split into two or more volumes constitutes a set.

9.) Attach the **Treatment Flag** from a book to an **Item Invoice**.

10.) Note all special instructions, ie. copy in color, do not disbind, multiple copies, etc.

11.) If the book has already been disbound, mark an "X" in red ink over the circle next to "pre-disbound" on the **Item Invoice.**

12.) If there is any call number label information noted by the client in the spine lettering box on the **Treatment Flag**, then use a red pen to check the "extra label" circle on the **Item Invoice**.

13.) If multiple copies have been requested or if an item must be split:

a. Make the appropriate number of copies of the **Treatment Flag**.

b. Attach each **Treatment Flag** to a separate **Item Invoice**.

c. Identify these items as a set on the **Item Invoice** just above the item number using a combination letter and number code which represents the number of volumes in the set. For instance, the first set of three books might be noted with A3 and a second set of eight books with B8. As you prep a job, keep track of set designations used, ie A,B,C... so that the same letter is not used twice within one job. Also, avoid using letters such as I or O which might be confused with numbers.

14.) Gently leaf through very brittle volumes to check for pages or foldouts needing tape mending. When tape mending, keep track of the number of pages per item and invoice accordingly. If mending a foldout that is broken into many pieces, track your total time spent taping that foldout and charge for one tape mend per minute spent on the foldout.
Also, when tape mending color pages and color foldouts, try to tape from the backside as much as possible.

15.) For books requiring color or foldout printing, circle the appropriate descriptions on the front of the **Item Invoice** with a red pen. This should result in extra miniature copies of the **Treatment Flag** being made which will later be attached to the folders containing the color work or foldouts.

16.) Books requiring color or foldout printing should be put on the top shelves of the cart from which the printers get their work, thus having any extra printing done at the beginning of a batch rather than at the end.

17.) When splitting a book, choose where the book will be split if the client has not done so. Try to split the book between chapters or sections. Also, note "Part 1" and "Part 2" on the respective **Treatment Flags.**

18.) If the label text on the **Treatment Flag** is illegible, copy the label information from the title page of the original.

19.) Complete a **Collation Check-Off** form.

BookLab Inc

GLOSSARY

Collation Check-Off – A form used by the collators to check off the item number of each book from a specific job once all collation, correction printing and insertions are completed.

Item Invoice – A document that travels with every book on which item treatment and invoice information is recorded as the work is done. The *treatment flag* is attached to this form and the *item number* is stamped onto it.

Item Number – A unique six digit number stamped onto the *item invoice* which designates the job to which the item belongs via the first three digits and its own number via the last three digits. (ie #275012 is item 12 from job 275.)

Job Calendar -- A form listing all of the jobs currently in-house by *job number* and client name. Additional information includes color batch, shipping dates, # of copies, etc...

Job Number -- A three digit number used to refer to a single shipment of books from a client.

Shipment Summary -- A form used to verify that all of the books and boxes sent by the client arrived at BookLab. Filled out by the client and mailed with their order, this form is also used to communicate instructions for billing, insurance and item treatment.

Treatment Flag -- A form completed by the client which communicates the treatment requested for each item.

BOOK REPAIRS WORK FLOW

Emory's Conservation Facility has been primarily designed for the physical treatment of materials housed in the general collections of the Emory Libraries. Treatments employed in the Conservation Department attempt to extend the useful life of items. While the primary objective of the repair operation is to preserve the intellectual content of the materials, consideration is also given to retaining as much of the original artifact as possible. Deteriorated or damaged components are replaced with more permanent and durable materials. And, while every attention is paid to the visual appearance of an item, this element is secondary to an item's structural needs.

Routine book repairs range from a simple page mend or insertion of a replacement page to the renovation of an old spine or to the fabrication of a new case that has been title stamped. Protective enclosures may also be made by conservation staff when the curatorial decision is made to not interfere with an artifact's integrity, or other limitations restrict more extensive treatment.

Identification:

Materials are identified for repair by each library. This may occur in the circulation department (use-driven), or as part of a regular and rotating review of the stacks by trained staff to find damaged materials (particularly for non-circulating collections). Library liaisons charge items out to Conservation. In the General Libraries, Conservation is a pseudo-borrower in the on-line cataloging system (DOBIS). Items can be tracked through the Conservation Unit by their call number, which is written on the repair flag.

The Conservation Department is currently able to accommodate the repair of 10-15 items each week per library. Repairs are generally completed within one week and returned in the following week's delivery. If a library sends more than their allotment, every effort is made to complete all of the items on a timely basis.

Each library liaison has a set of cloth swatch samples so that they may select cloth /color preferences for volume sets or as otherwise appropriate: lettered cloths are only used for spine repair due to availability of cloth width; numbered cloths are available for any type of repair.

Transportation:

Damaged materials arrive each day from one of the five Emory Libraries. Items from Theology, Health Sciences, and Law are picked upon their prescribed day (see schedule following) by the van driver from the Materiel Center. Items from Oxford are sent via campus mail and delivered to the Conservation Department by mail room personnel. Items from the General Libraries (Woodruff, Candler, and Chemistry) are picked up from the Woodruff Processing Department by Conservation personnel according to the schedule. Items from Woodruff Reference and Documents are delivered directly to the Conservation Department as needed or on a prearranged schedule.

Items are delivered to the cart immediately inside the Conservation Unit, next to the "Completed Shelves," and are then sorted by Conservation personnel for appropriate repair.

Sorting:

Books are sorted and flagged by color according to library and by the type of repair they need and then placed on the appropriate repair shelf. Flag color codes are:

LIGHT BLUE	WOODRUFF (also CANDLER and CHEMISTRY)
DARK BLUE	WOODRUFF REFERENCE and DOCUMENTS
PINK	PITTS THEOLOGY
GREEN	OXFORD COLLEGE
GOLD	HEALTH SCIENCES CENTER
SALMON	LAW

Items requested as RUSH receive priority and an additional red flag. These red flagged items will be placed on the RUSH/SPECIAL ATTENTION shelf. These materials are to be completed before any other book repairs.

Barcodes and call number tags which would be removed during repair are saved and kept with each book.

Student Procedures:

Items are repaired by student assistants who have been instructed in a variety of routine repair procedures. Repair procedures are also written out and kept in the "Conservation Procedures Manual" (on the supervisor's desk) for reference. All operations are overseen by the Conservation supervisor.

Work is done in batches to increase productivity. Workers should select which repairs to do each day by considering first their repair capabilities and or skill levels, the schedule of repairs indicated by colored flags (the items' incoming dates), and the amount of time in their work period. Work is completed on the day prior to when it is due to be returned to its library. Generally, finished items are placed in the book presses. Incomplete work must be placed on the "In-Process shelves," NOT left at the student's work bench.

Students select materials according to the needs of the repairs (for example, spine repair cloth is judged by matching color and needed weight of cloth). Most materials are available at the pre-cut station. The conservation technician is responsible for maintaining available supplies.

Completed Work:

Items placed on completed shelves await review by the Conservation supervisor for quality control. Items in need of adjustments or further repair are returned to the appropriate repair person with instructions. Items passing quality control have their flags removed and are left on designated shelves until that library's scheduled pick-up day. Flags are placed in the wooden box on top of the completed shelf (for preparing statistics at the end of the month.) Reviewed books are placed in the cart alongside the "Completed Shelves" to be picked up by the Materiel Center delivery person the morning of designated day (usually by 10:00 a.m.) Items are returned to their respective library liaison for inspection and re-shelving.

Items for Oxford are packed in a labeled box and sent via campus mail back to Oxford as soon as all books are completed. Completed items for Woodruff Reference and Documents are delivered directly to the liaison of that department once completed. Completed RUSH items are returned as soon as possible to the library.

SCHEDULE OF DELIVERY/REPAIR

FLAG COLOR	LIBRARY	COMPLETE ON/BY	PICK UP DAY
Light Blue	Woodruff	Friday	Monday
Pink	Theology	Monday	Tuesday
Green	Oxford	Tuesday	Wednesday
Gold	Health Science	Wednesday	Thursday
Salmon	Law	Thursday	Friday
Red	RUSH	ASAP	ASAP

Other Activities:

Book repair is the ongoing student assignment. Students are also assigned regular shop maintenance responsibilities, in particular cleaning on a regular schedule. One student a month is in charge of cleaning the sink on Fridays. The first student in each day empties the presses and removes waxed paper from inside each book before placing the books on the "Completed Shelves".

Protective enclosures (usually wrappers and envelopes with sleeves) are made for each library's Special Collections at a designated time each year. The number completed per library is based on the type of enclosure and how many can be completed within a given allotment of time.

Statistics:

Statistics are kept by individual students as well as the conservation technician and the conservation supervisor. The colored flags are tallied to indicate the number of repairs per library and per student. Statistics on other department activities are tracked through the students' individual statistic sheets, recording the amount of time spent on the various conservation activities, i.e., spine repairs, minor repairs, cleaning, etc. All statistics are are tallied on a monthly basis.

Statistics are used to produce cost analysis figures and to determine the progress of each student by indicating how many and what type of repairs they have done in relation to how much time was spent. They are also reported yearly to the Vice-Provost of the Libraries, and to national organizations such as ARL for comparison purposes with other conservation facilities around the country.

Columbia

Conservation Monthly Statics 1992-93

Nov-92	Con., Full	Con., Full	Deacidif.	Deacidif.	D/S	Fan	Flat	Leaves	Leaves	Encap.	Mats	Mats	Pam-	Pocket	Re-	Re-	Re-	Tip-Ins	Wrapper	Other	Hours
	Volume	Flat	Acqueous	Non-Acq.	Box	Bind	Repair	In Vol.	Encap.	Dimensions	Exhib.	Stor.	phlets		Back	Case	Sew				
AVERY/FINE ARTS/WARE															5	2		2		2	8
BARNARD						1															
BIOLOGY																1					2
BUSINESS															1	1		3			2
CHEMISTRY																6		5			8
COLLEGE LIBRARY						1										4					5
COLUMBIANA																					
EAST ASIAN/SPECIAL	38(2c)					3	10									12	2				67
ENGINEERING																3					4
GENERAL/BURGESS						7							2	4	14	29	4	18		19	63
GEOLOGY/GEOSCIENCES																		1			
HEALTH SCIENCES																					
HEALTH SCI. (SPECIAL)																					
JOURNALISM																2					2
LEHMAN						1							2			1		1		3	5
MATHEMATICS																		3			
MUSIC													56				56				30
NEH															13		1				27
PHILOSOPHY																					
PHYSICS																2		8			3
PSYCHOLOGY																1		2			2
RARE BOOKS & MSS.	4																				40
REFERENCE															2	4	1	3			7
SCIENCE																		1			
SLS/GRAPHIC ARTS																					
SOCIAL WORK																2					2
SUPPLY ROOM																					
NOVEMBER TOTALS	4	0	0	0	0	13	10	0	0	0	0	0	60	4	35	70	64	47	0	24	277

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Name:__________ Mo/Yr:______

STAFF
Monthly Production Statistics

UNIT/PROJECT	CATEGORY	VOLS/PCS	# HOURS

UC Berkeley 1989

UNIT/PROJECT	CATEGORY	VOLS/PCS	# HOURS
SORTING			
DEPT MEETINGS & FOLLOW-UP			
LAB MAINTENANCE			
SURVEYS			

Berkeley

NAME MO/YR

STAFF
Monthly Production Statistics

UNIT/PROJECT CATEGORY VOLS/PCS HRS/$

"GNRL" [use appropriate unit or project name]

"PREP" [report pieces and hours, include hours spent on endsheets and super]

"REPAIR--BOOKS" [use for book treatments taking two hours or less per piece]

"REPAIR--PAPER" [use for treatments on flat paper taking two hours or less per piece]

"REPAIR--PHOTOS" [use for treatments on photographs taking two hours or less per piece]

"MAJOR TREATMENT--BOOKS" [use for treatments taking more than two hours per piece]

"MAJOR TREATMENT--PAPER" [use for treatments on flat paper taking more than two hours per piece]

"MAJOR TREATMENT--PHOTOS" [use for treatments on photos taking more than two hours per piece]

"DISASTER RESPONSE" [everyone involved reports hours; person coordinating response reports pieces]

"CUTS"

"WRAPPERS" [report pieces and hours]

"PHASE BOXES" [person measuring reports just hours; project manager or conservator reports pieces & hours; BPD reports pieces and dollars]

"ENCAPSULATION" [report pieces and hours]

"GRAPHICS ENCLOSURES" [includes portfolios, folders, tubes, frames; report pieces and hours & dollars if applicable]

Berkeley

UNIT/PROJECT	CATEGORY	HOURS
-----	"DEPARTMENT MEETINGS & FOLLOW-UP" [report hours for research projects, documentation, new technologies & materials, not for other meetings]	
-----	"CONSULTATION & TRAINING" [planning and teaching components of training programs; reference questions; tours]	
-----	"LAB MAINTENANCE" [ordering supplies, clean-up, moving furniture, new equipment]	
"unit/project name"	"SORTING" [use for circulating collections]	
"unit name"	"SURVEYS" [collection condition surveys]	

UC Berkeley 198

CONSERVATION TREATMENT DIVISION

PRODUCTION HOURS

FY 1992/93

Month/year: January 1993

NAME	Production	Sorting	Surveys	Lab Mainten.	Meetings/ Consult.	Other	Month's Total	Total To Date
	80	6	2	4	11	24	127	756
	307	0	0	15	0	0	322	995
	96	10	2	6	12	0	126	842
	61	14	3	6	5	15	104	737
	84	11	3	0	4	0	102	742
	50	0	0	42	27	0	119	951
	104	21	3	8	4	0	140	693
	47	0	0	2	18	18	85	397
	503	0	0	1	19	0	523	2276
Categories' Totals	1332	62	13	84	100	57	1648	8389

Berkeley

CONSERVATION DEPARTMENT MONTH/YEAR: JANUARY 1993

THE LIBRARY

MONTHLY PRODUCTION/EXPENDITURE STATISTICS

ACCOUNT: LIBRARY BINDING

TREATMENT CATEGORIES	VOLS/PIECES		EXPENDITURES ($/HRS)	
	MONTH	YTD	MONTH	YTD
TOTAL LIBRARY BINDING	5387	40532	$63,374	$443,871
MYLAR	920	5680		
SERIALS	44	503		
MONOGRAPHS	876	5177		
BUCKRAM	3064	21887		
SERIALS	2991	20792		
MONOGRAPHS	73	1095		
REBINDS	136	635		
NEW CASES	552	2996		
1/4 BINDS	253	667		
SERIALS	0	0		
MONOGRAPHS	253	667		
PAMPHLETS	462	8667		
TOTAL CONSERVATION TREATMENT	767	5557	497	4077
PREP	133	613	126	617
REPAIR- BOOKS	618	4607	301	2740
REPAIR- PAPER	13	132	4	154
REPAIR PHOTOS	0	41	0	4
MAJOR TREATMENT-BOOKS	1	16	57	254
MAJOR TREATMENT-PAPER	0	10	0	207
MAJOR TREATMENT-PHOTOS	0	3	0	32
DISASTER RESPONSE	2	135	8	59
CUTS	0	0	1	10
TOTAL PROTECTIVE ENCLOSURES	52	3259	23	875
GRAPHICS ENCLOSURES	1	2175	1	273
PHASE BOXES	20	654	12	415
PORTFOLIOS	0	0	0	0
ENCAPSULATION	31	427	10	182
OTHER	0	3	0	5
TOTAL PRESERVATION REPLACEMENT	98	698	$2,689	$32,752
REPLACED	95	548	$2,689	$32,752
COMMERCIAL REPLACEMENT	95	201	$2,689	$9,132
ORIGINAL PHOTOCOPY	0	205	$0	$20,603
ORIGINAL MICROCOPY	0	142	$0	$3,017
NOT REPLACED	3	150		
WITHDRAWN	3	88		
RESHELVED	0	62		
MISSING PAGES	0	109		

UC Berkeley 1989

N.U.Library

REPAIR SECTION

STATS SHEET FOR THE MONTH OF:

Repairs Completed

FBE/ clth strp ______
recover spine ______
cloth spine strips ______
tip ins and guards ______
cloth and tissue hinges ______
encaps. pages ______
leather treatment ______
other ______
TOTAL ______

Items Treated

vols. repaired (incl. brittle) ______
stiffen covers ______
line bind ______
pamphlet bind ______
cat bind ______
staple bind ______
pocket binders ______
phase boxes ______
portfolio cases ______
wrappers ______
encapsulation ______
commercial binding ______
TOTAL ______

Brittle Books

U.B.R.P. repair or enclosure ______
Micro-retained repair or enclosure ______
TOTAL ______

treatment hours______ hours non-lab______ hours per item______

completed "A" points______ items sent to U.B.R.P. _____

Northwestern

BRITTLE

REPAIR SLIP

Recover spine
    don't lift paper/leather
    remove old buckrum
    cover old glue
Mount old spine
Add paper liner to spine
Folded back endsheet
    case in
Reglue liner to spine
Cloth flange f/b
Cloth strip
Filmoplast page(s)_____
Replace loose pieces
    tip/hinge/guard in
Tip together split f/b
Tighten hinges f/b
Hinges f/b
    tissue/cloth
Klucel G leather
Consolidate fraying
Other

37

BRITTLE

REPAIR SLIP

Recover spine
    don't lift paper/leather
    remove old buckrum
    cover old glue
Mount old spine
Add paper liner to spine
Folded back endsheet
    case in
Reglue liner to spine
Cloth flange f/b
Cloth strip
Filmoplast page(s)_____
Replace loose pieces
    tip/hinge/guard in
Tip together split f/b
Tighten hinges f/b
Hinges f/b
    tissue/cloth
Klucel G leather
Consolidate fraying
Other

BRITTLE

REPAIR SLIP

Recover spine
    don't lift paper/leather
    remove old buckrum
    cover old glue
Mount old spine
Add paper liner to spine
Folded back endsheet
    case in
Reglue liner to spine
Cloth flange f/b
Cloth strip
Filmoplast page(s)_____
Replace loose pieces
    tip/hinge/guard in
Tip together split f/b
Tighten hinges f/b
Hinges f/b
    tissue/cloth
Klucel G leather
Consolidate fraying
Other

38

Northwestern

SPECIAL COLLECTIONS

Conservation Lab
Advice Slip

Title-

Date sent-
Sent by-

How much use does this item receive?

weekly monthly yearly rarely

Relative value to the collection

minimal average high outstanding

Artifactual value

minimal average high outstanding

Please retain the original:

Suggested treatment:

encapsulation _____
enclosure _____
repair _____
rebind _____
other: _____

Comments:

SPECIAL COLLECTIONS

Conservation Lab
Advice Slip

Title-

Date sent-
Sent by-

How much use does this item receive?

weekly monthly yearly rarely

Relative value to the collection

minimal average high outstanding

Artifactual value

minimal average high outstanding

Please retain the original:

Suggested treatment:

encapsulation _____
enclosure _____
repair _____
rebind _____
other: _____

Comments:

Northwestern

Volumes treated for the month of:								RUSH	TOTAL
CIRC.									
ART									
AFRICANA									
REFERENCE									
CORE									
S.E.L.									
TRANS.									
RESERVE									
Gov.Pubs.									
PER.									
PER. PROD.									
CURR.									
MATH									
I.L.L.									
OTHER									
								TOTAL	
UBURP rep.									
Micro-ret.									
COMM.BIND.									

N.U.Library

MONTH OF:

COMPLEX TREATMENTS: MONTHLY REPORT

	BOOKS	PAMPHLETS	MAPS/DOCUMENTS	TOTAL
# OF ITEMS				
TOTAL TIME				
TREATMENTS:				
BOUND				
ENCLOSURE				
REPAIRED				
DEACIDIFIED				
			TOTAL TREATMENTS:	

MAJOR TREATMENT CATEGORY BREAKDOWN:

BOUND

Case ______

Restore ______

Laced-in ______

Split-board ______

Other:

REPAIRED

Rehinge ______

Consolidate ______

Other: ______

ENCLOSURE

Phase ______

Drop-spine ______

Pamph. case ______

Encapsulation ______

Other:

DEACIDIFIED

Solvent ______

Acqueous ______

Time distr.: Spec. Coll. ___% Music ___% Archives ___% Main
___% (other) ___% (other) ___% COMMENTS:

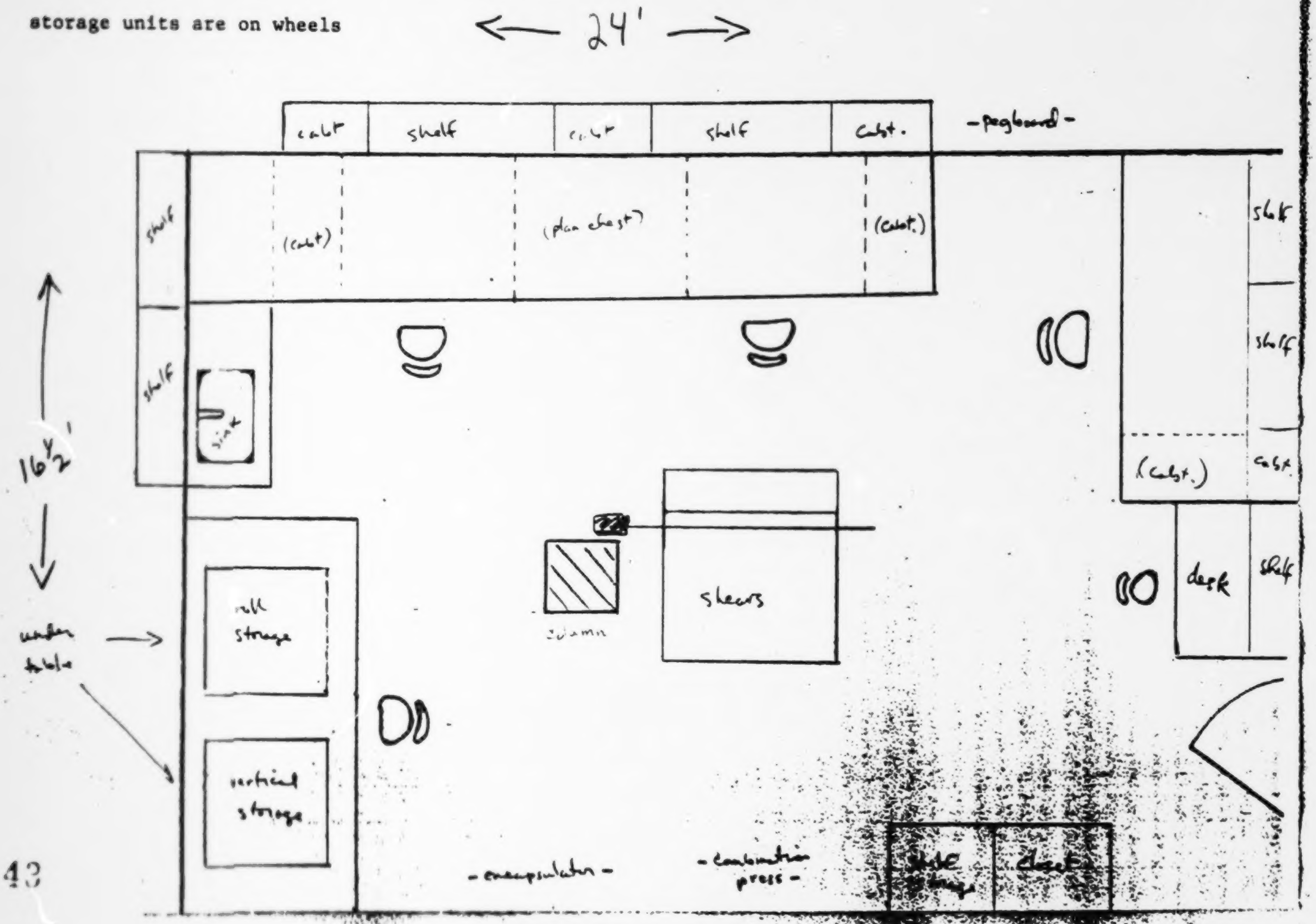
DEPT. B PTS.

Design for auxillary Lab (Lab II) at Northwestern University Library

Bench tops are 42" wide and 38" high

cabinets under tops each have two drawers and one cupboard

storage units are on wheels


24'
cabt
shelf
cabt
shelf
Cabt.
-pegboard-
shelf
(cabt)
(plan chest)
(cabt.)
shelf
shelf
sink
16½'
shelf
shelf
(cabt.)
cabt
desk
shelf
under table
roll storage
vertical storage
column
shears
-encapsulator-
-combination press-
closet

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Itemized approximate cost of Lab II, N.U.L. ('89 prices)

The following is a proposal for remodelling Lab II with estimated costs.

I. Cabinetry and installation

2 benches (one 8', one 16')	
3 underneath cabt. units- 2 drawers, 1 door	
13 shelves, total	
4 door cabts.(by shelves)	
1 desk top (to mount NUL file cabt. units)	
1 self-standing coat closet	
1 self-standing shelf storage unit	
1 roll goods storage unit, on casters	
1 sheet good vertical storage unit, on casters	
1 sink, cabt. and hook up	$18,875

II. Furniture

2 file cabt. units	
2 stools	
1 office chair	
3 task lamps	
	$550

III. Equipment

board shears	5,000
combination press	
other presses	
hand tools	
press boards	
weights	
	$4,450
	9,450

IV. Remodeling

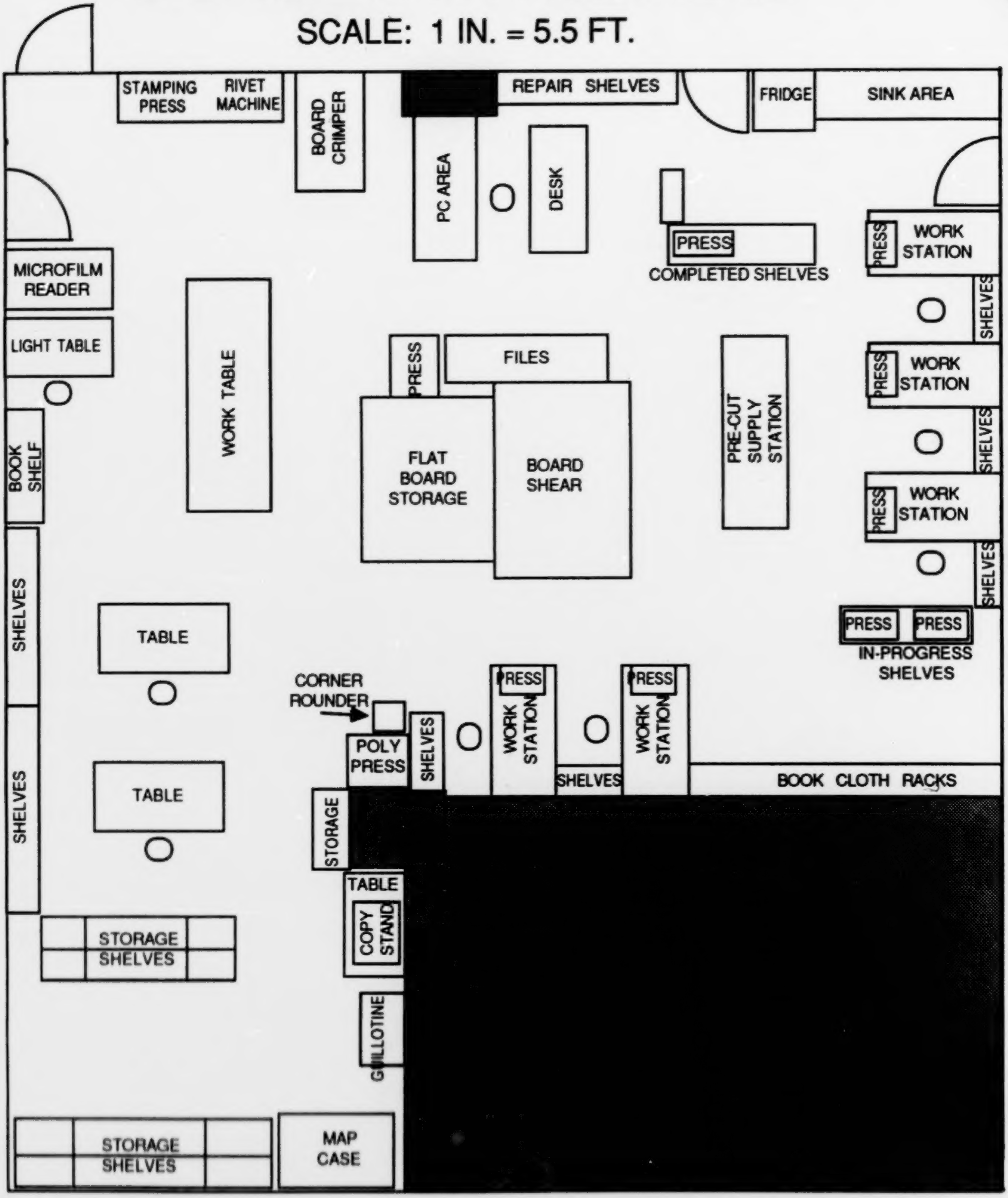
electrical work	
plumbing	
ceiling and lights	
painting	
floor	
(estimate will become more precise in next week or so)	$6,000
TOTAL	$29,875
	34,875

Emory

revised 5/21/92

FLOOR PLAN
CONSERVATION LAB

SCALE: 1 IN. = 5.5 FT.

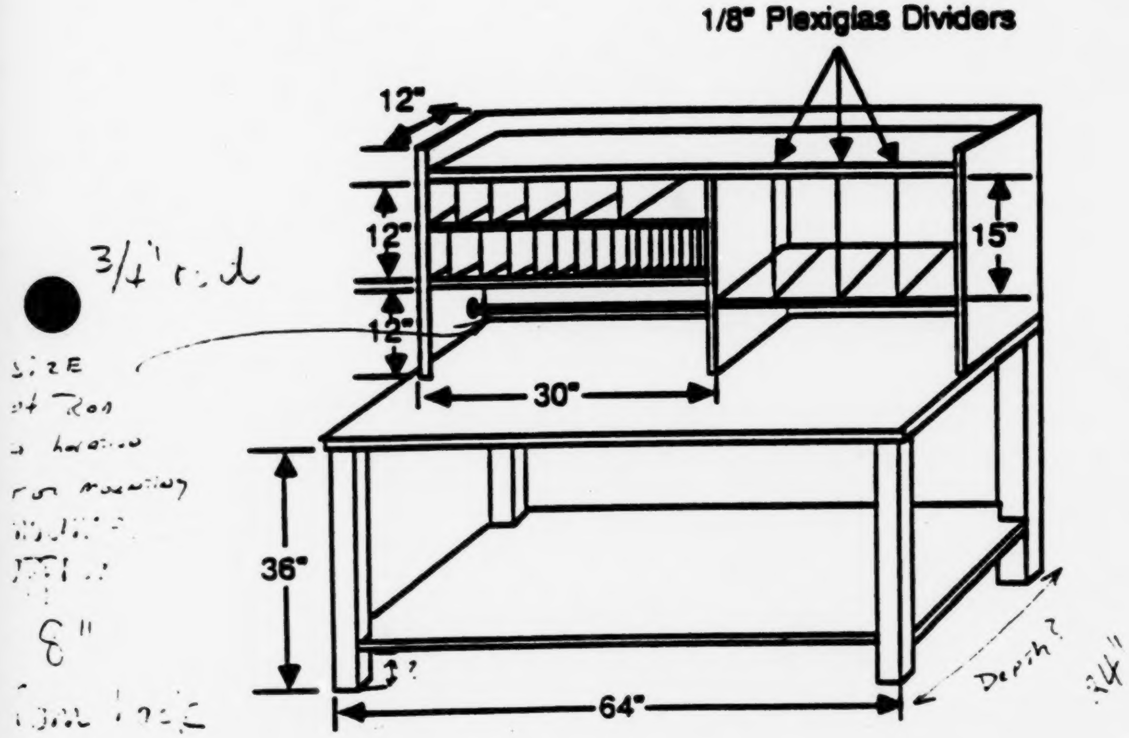

STAMPING PRESS
RIVET MACHINE
BOARD CRIMPER
REPAIR SHELVES
FRIDGE
SINK AREA
PC AREA
DESK
PRESS
COMPLETED SHELVES
PRESS
WORK STATION
SHELVES
MICROFILM READER
LIGHT TABLE
WORK TABLE
PRESS
FILES
FLAT BOARD STORAGE
BOARD SHEAR
PRE-CUT SUPPLY STATION
PRESS
WORK STATION
SHELVES
PRESS
WORK STATION
SHELVES
BOOK SHELF
SHELVES
TABLE
PRESS
PRESS
IN-PROGRESS SHELVES
CORNER ROUNDER
POLY PRESS
SHELVES
PRESS
WORK STATION
SHELVES
PRESS
WORK STATION
BOOK CLOTH RACKS
SHELVES
TABLE
STORAGE
TABLE
COPY STAND
STORAGE SHELVES
GUILLOTINE
STORAGE SHELVES
MAP CASE

PRECUT SUPPLY STATION:

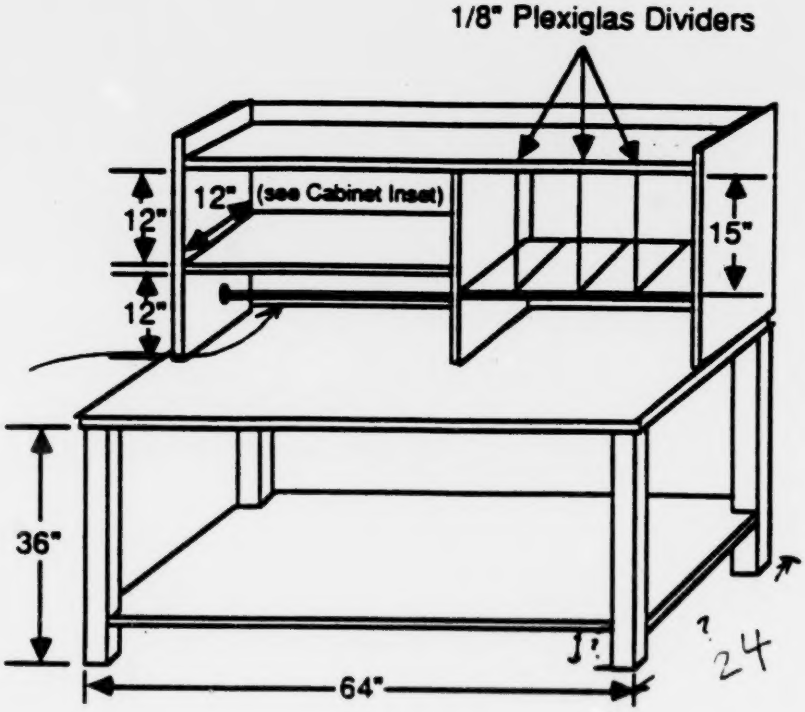
Painted wood finish; routed slots for plexiglas dividers

Outer dimensions to match the Supply Station: Book Cloth

Cabinet inset for upper lefthand compartment


1/8" Plexiglas Dividers
12"
12"
12"
15"
30"
36"
64"
3/4" rod
Size of Rod & hardware for mounting
8"
?
Depth?
24"

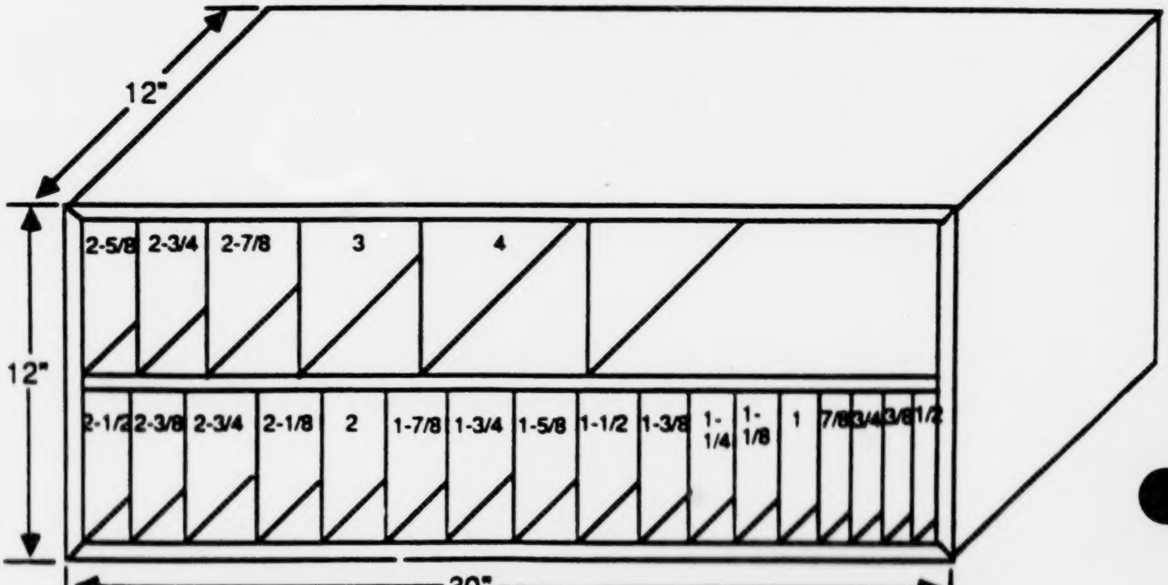
PRECUT SUPPLY STATION (continued)


1/8" Plexiglas Dividers
12"
(see Cabinet Inset)
12"
12"
15"
36"
64"
1'
24

3/4" rod

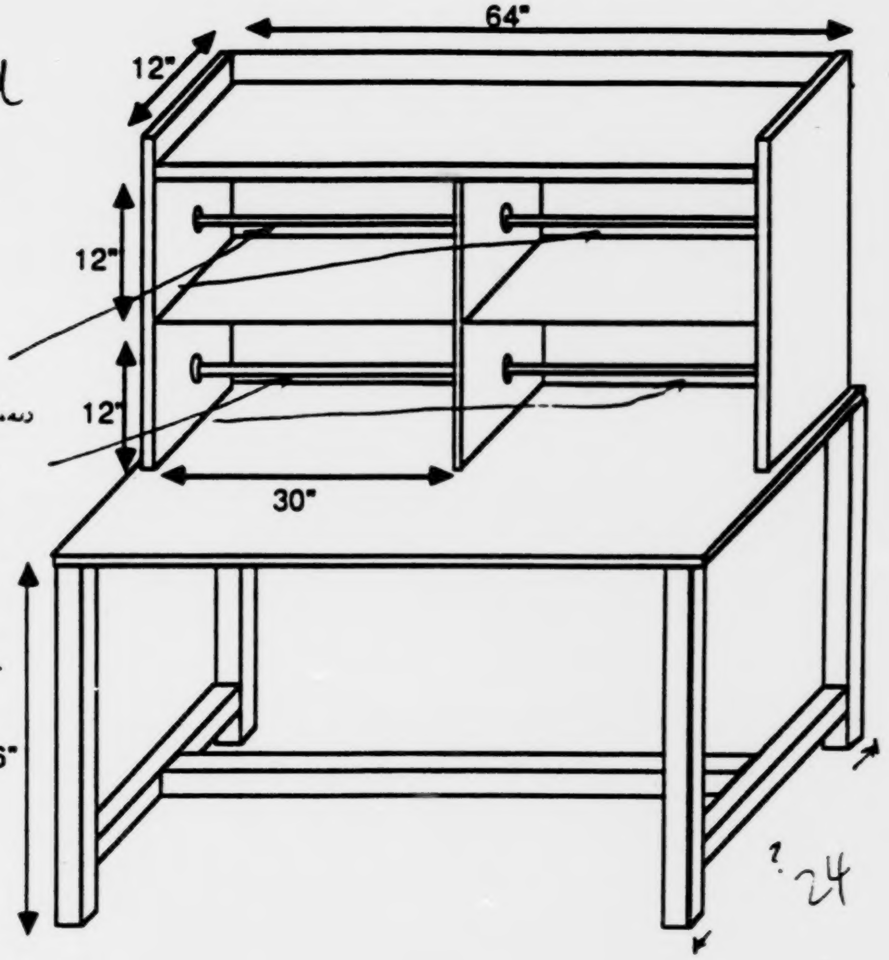
Size of
Rod &
Location
For Mounting
[illegible]
- 8"
[illegible] back

PRECUT SUPPLY CABINET INSET


12"
12"
2-5/8
2-3/4
2-7/8
3
4
2-1/2
2-3/8
2-3/4
2-1/8
2
1-7/8
1-3/4
1-5/8
1-1/2
1-3/8
1-1/4
1-1/8
1
7/8
3/4
5/8
1/2
30"

SUPPLY STATION: BOOK CLOTH FOR SPINE REPAIR

Painted wood finish; removable dowel rods
Outer dimensions to match the Precut Supply Station



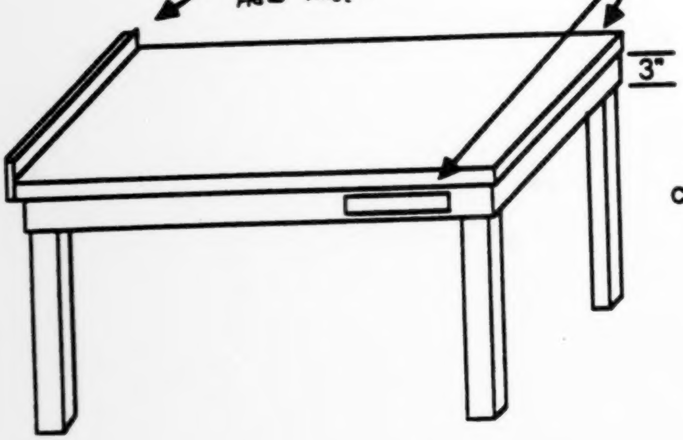
3/4" rod

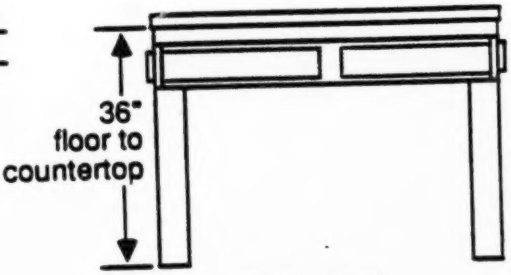
SIZE of Rods & Locations for Mounting

[illegible]
[illegible] 8"
[illegible] thick

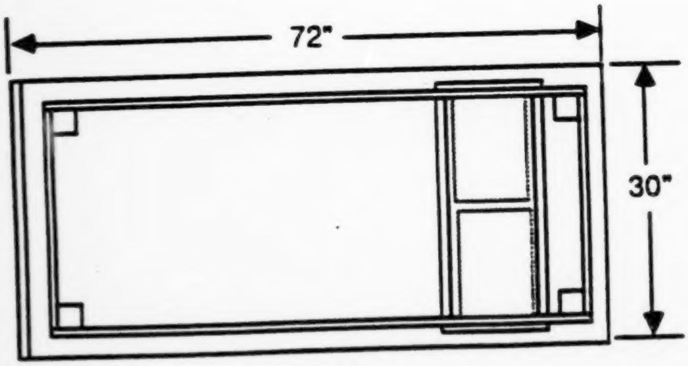
WORK BENCH:

Need five work benches constructed
Formica countertop; formica splash guard


splash guard
2 inches
How Tall?
back-to-back drawers
(no handles)
3"


36"
floor to
countertop

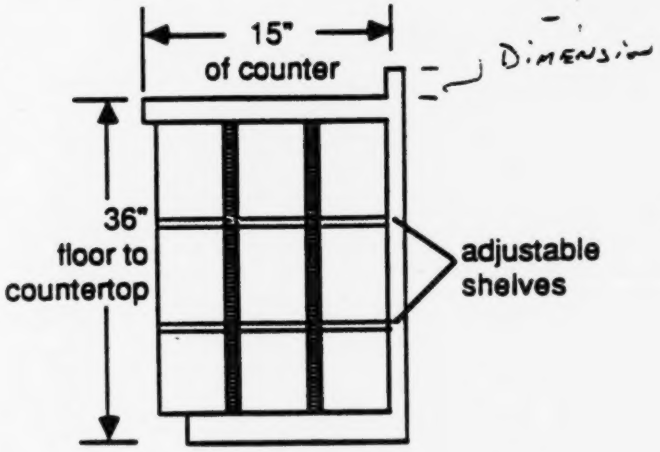
(Side view)



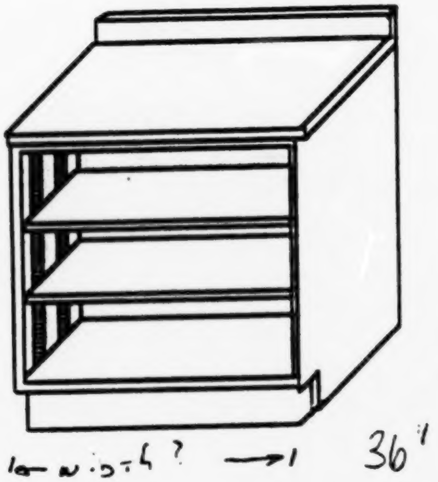
(Top view)

BOOKCASE:

Contiguous to Work Bench, creating an L-shaped work area
Need five bookcases constructed
Oak plywood, w/ trim

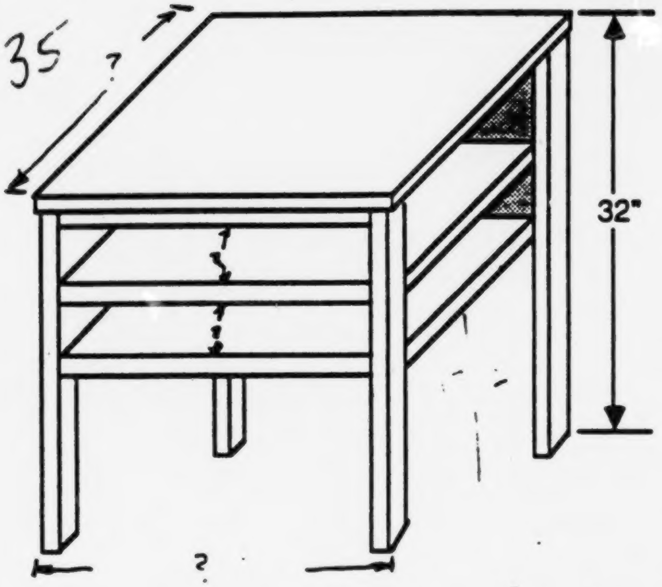

15"
of counter
Dimension
36"
floor to
countertop
adjustable
shelves

(Side view)

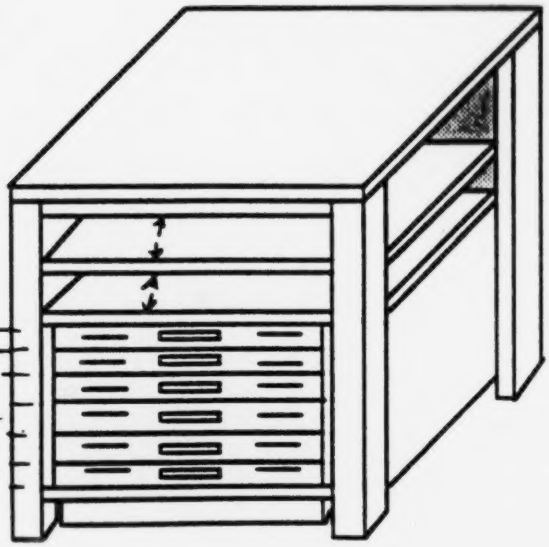


Countertop and splash guard
covered w/ formica

BOARD STORAGE:
Fitted to a 25-drawer Slimline map case
Need two of these cabinets constructed
Formica top; formica shelves; oak legs
Back panel



47 + allowance for legs (wooden piece fits over commercial cases. need to allow access to drawers)



PLEASE PROVIDE DATA ON DRAWER SIZES

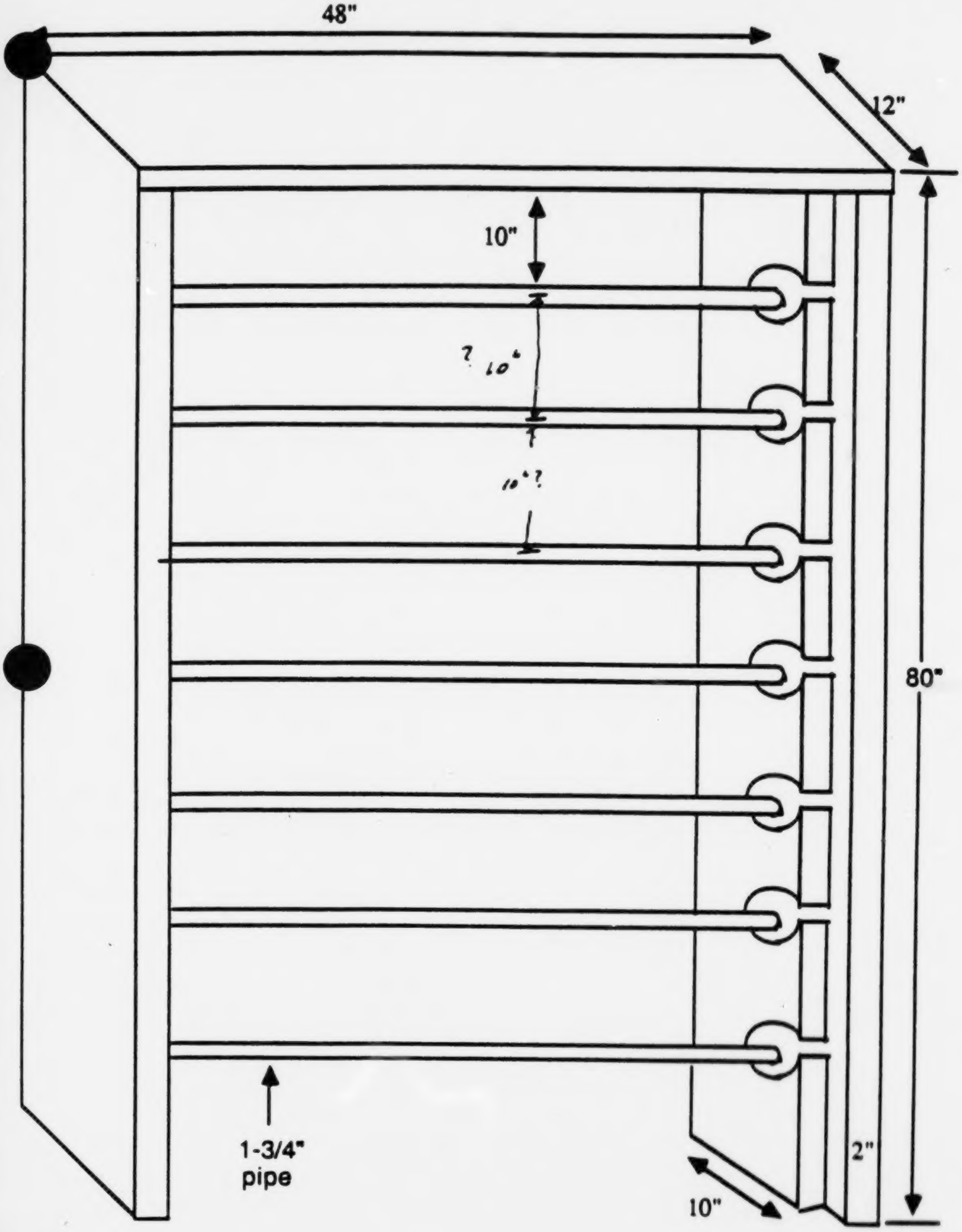
Map Case =
35" D x 47" W x 17-1/2" H

Base = 6" high

This is a commercial [illegible] 17½" high
14.5 left for 2 shelves - each approx 6-7"

BEST COPY AVAILABLE

BOOK CLOTH STORAGE RACK:


48"
12"
10"
? 10"
10"?
80"
1-3/4"
pipe
2"
10"

we will NEED to Discuss the offsets and connections of the pipes for this side frame.

San Francisco Public Library

Book and Paper Conservation Lab

Equipment and Space Planning

Space: 1200 square feet

Staff: Book conservator, paper conservator, 2 assistants

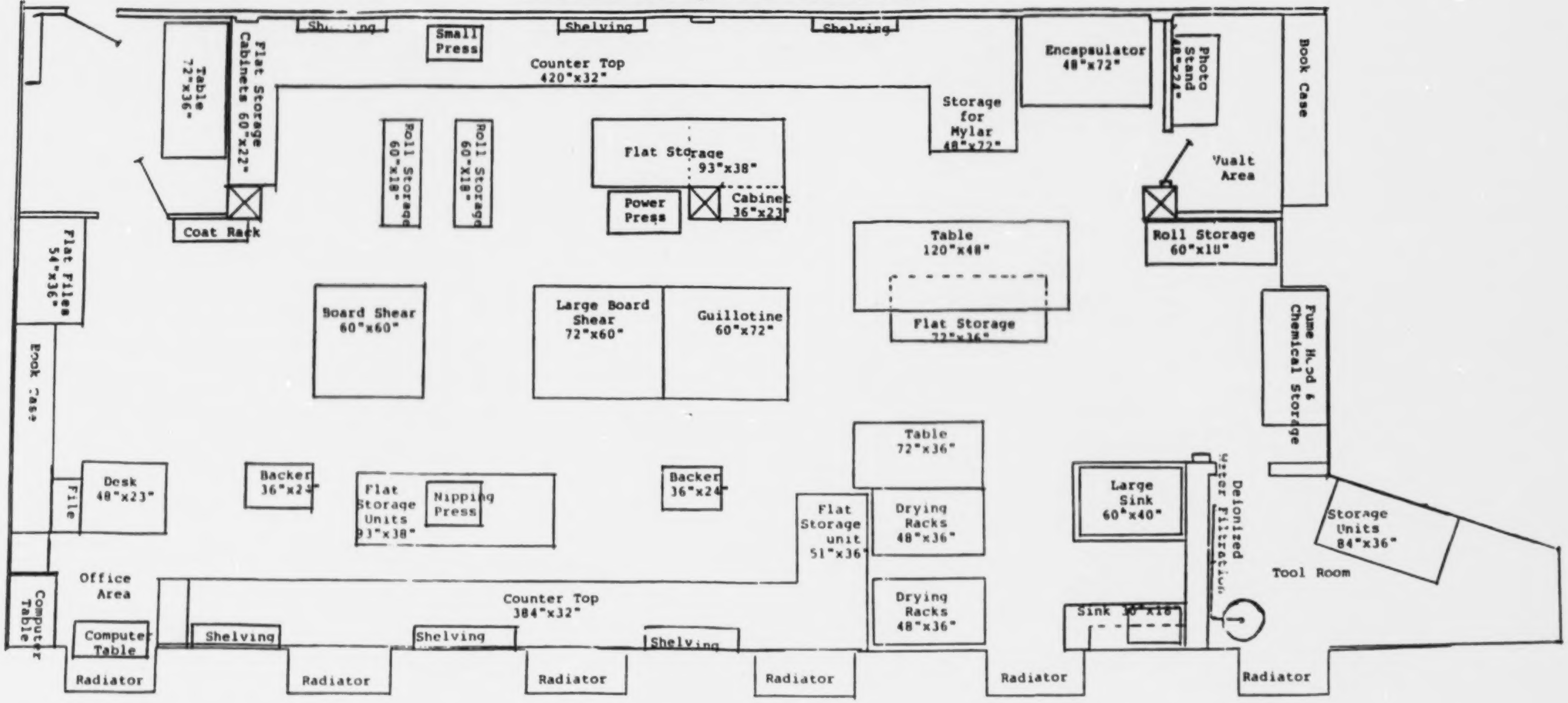
Furniture:
2 stationary work benches 4'D x 20'L x 38"H
2 custom work tables 6'D x 12'L x 38"H
stools
1 work table on wheels 3'D x 6'L x 30"H
sink (and high purity water system) 4' x 5'
Wei T'o spray deacidification chamber
fume hood 4' x 5'
2 metal cabinets
wall rack units for rolls of paper, cloth, etc.
industrial shelving
desk and chair
file cabinets
book shelving
map cases

Equipment:
book steamer
drying rack
board shear
standing press
nipping press
ultrasonic welder
Booksaver photocopy machine
mat cutter
light table
suction table
microscope
pH meter
magnifying lamp
board creaser
Quickprint machine for spine lettering
35 mm camera for documentation
refrigerator
hot plate
microwave oven
personal computer
hygrothermograph

COLUMBIA UNIVERSITY

CONSERVATION LAB : LAYOUT

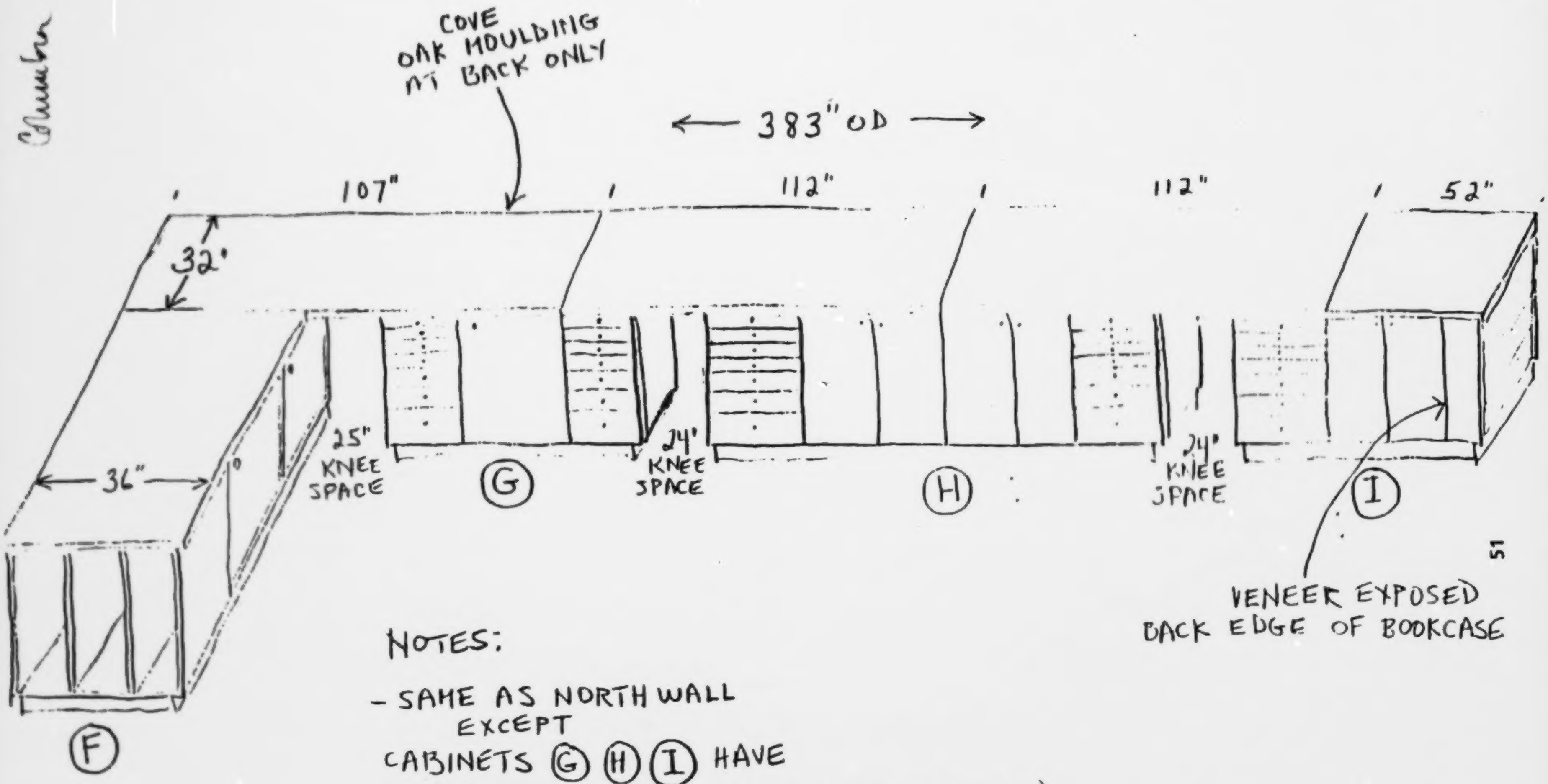
Main Room 1760 Sq. ft. : Tool Room 80 Sq. ft.


Shelving
Small Press
Shelving
Shelving
Table 72"x36"
Flat Storage Cabinets 60"x22"
Counter Top 420"x32"
Encapsulator 48"x72"
Photo Stand 48"x24"
Book Case
Storage for Mylar 48"x72"
Roll Storage 60"x18"
Roll Storage 60"x18"
Flat Storage 93"x38"
Power Press
Cabinet 36"x23"
Vualt Area
Coat Rack
Flat Files 54"x36"
Table 120"x48"
Roll Storage 60"x18"
Flat Storage 72"x36"
Board Shear 60"x60"
Large Board Shear 72"x60"
Guillotine 60"x72"
Fume Hood & Chemical Storage
Book Case
Table 72"x36"
Desk 48"x23"
File
Backer 36"x24"
Flat Storage Units 93"x38"
Nipping Press
Backer 36"x24"
Flat Storage unit 51"x36"
Drying Racks 48"x36"
Large Sink 60"x40"
Deionized Water Filtration
Storage Units 84"x36"
Office Area
Tool Room
Computer Table
Counter Top 384"x32"
Drying Racks 48"x36"
Sink 30"x18"
Computer Table
Shelving
Shelving
Shelving
Radiator
Radiator
Radiator
Radiator
Radiator
Radiator

Scale ¼" = 1'

South Wall

BEST COPY AVAILABLE


COVE
OAK MOULDING
AT BACK ONLY
← 383" OD →
107"
112"
112"
52"
32"
36"
25" KNEE SPACE
G
24" KNEE SPACE
H
24" KNEE SPACE
I
VENEER EXPOSED BACK EDGE OF BOOKCASE
F

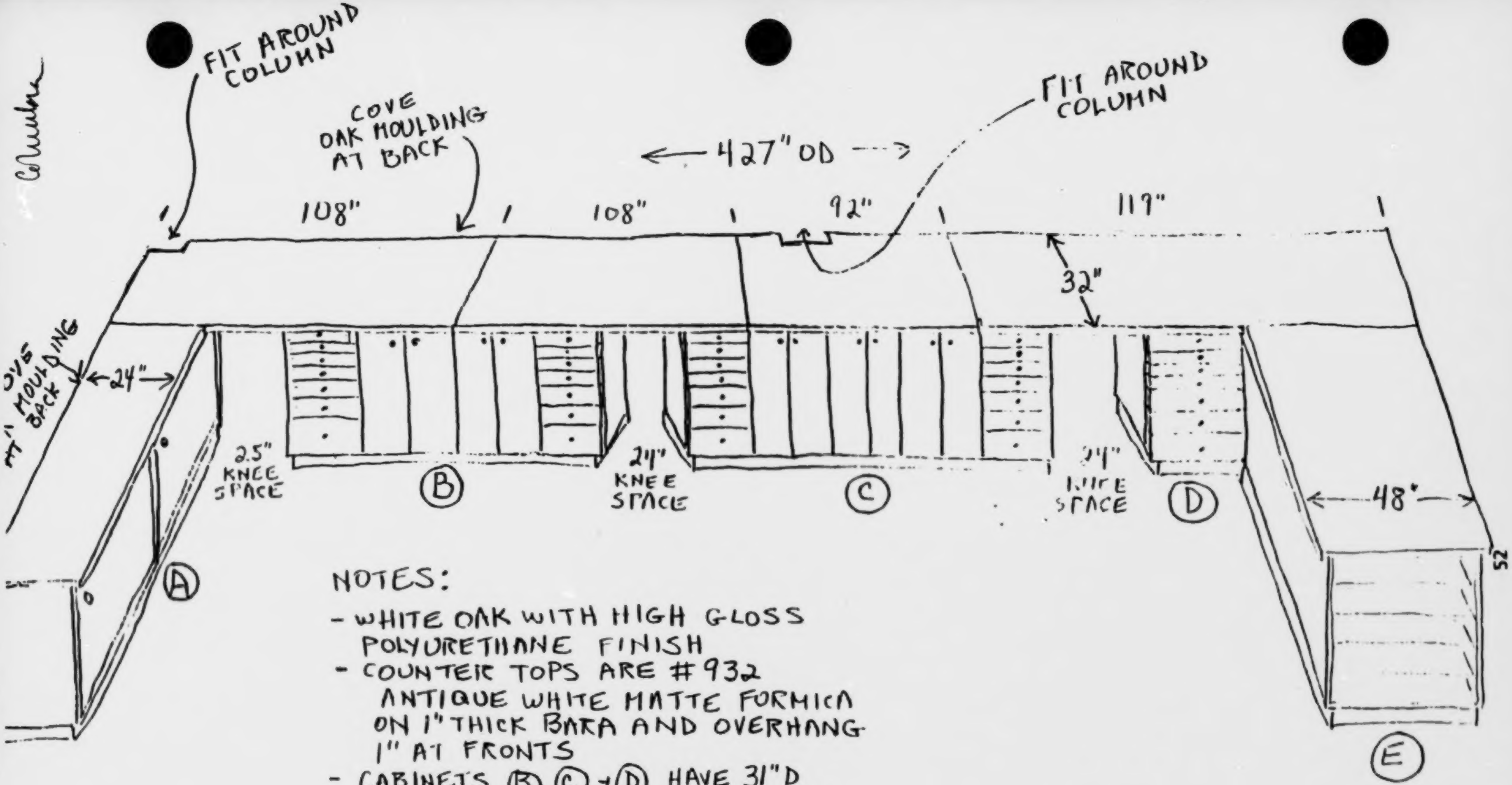
NOTES:

- SAME AS NORTH WALL
  EXCEPT

CABINETS Ⓖ Ⓗ Ⓘ HAVE
24" SIDES (NOTHING FLYS EXCEPT BOOKCASE)

SOUTH WALL

BEST COPY AVAILABLE

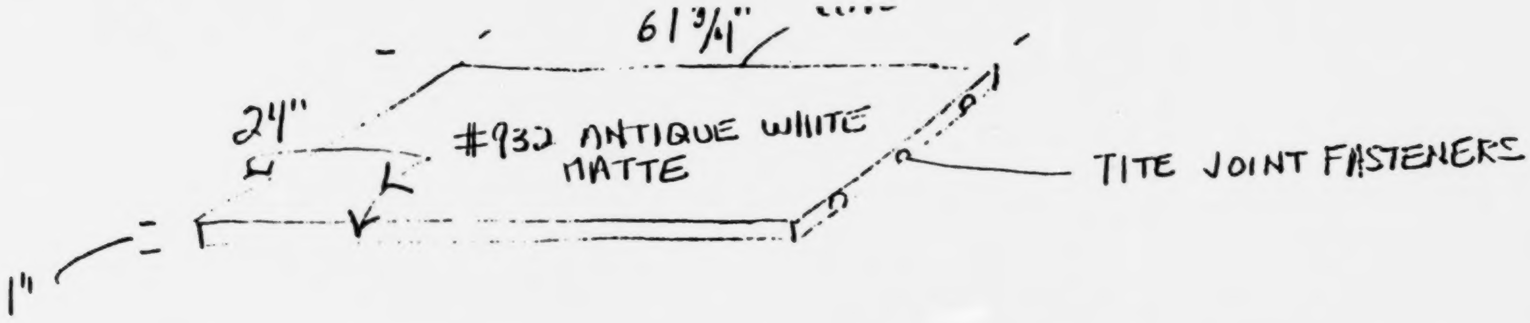

Column
FIT AROUND COLUMN
COVE OAK MOULDING AT BACK
FIT AROUND COLUMN
427" OD
108"
108"
92"
119"
32"
COVE 4" MOULDING BACK
24"
25" KNEE SPACE
24" KNEE SPACE
24" KNEE SPACE
A
B
C
D
E
48"
52

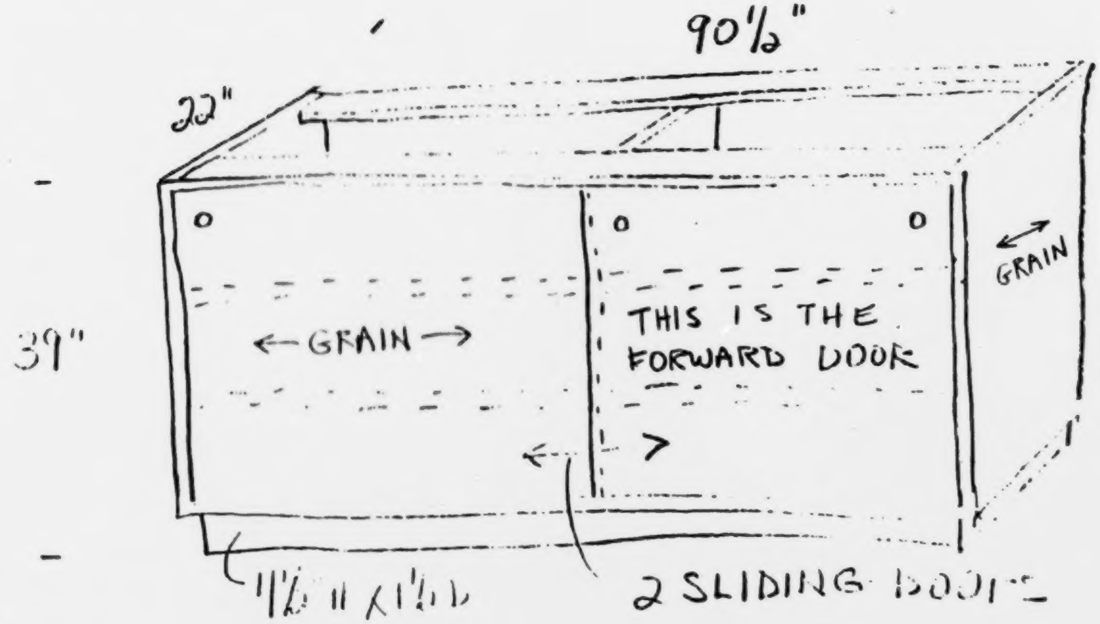
NOTES:

- WHITE OAK WITH HIGH GLOSS POLYURETHANE FINISH
- COUNTER TOPS ARE #932 ANTIQUE WHITE MATTE FORMICA ON 1" THICK BARA AND OVERHANG 1" AT FRONTS
- CABINETS Ⓑ Ⓒ + Ⓓ HAVE 31"D FLYING SIDES AT KNEE SPACES
- GRAIN ON ALL DOORS, DRAWERS + SIDES RUN HORIZONTALLY
- KNOBS MATCH EXISTING

NORTH WALL

Columbia

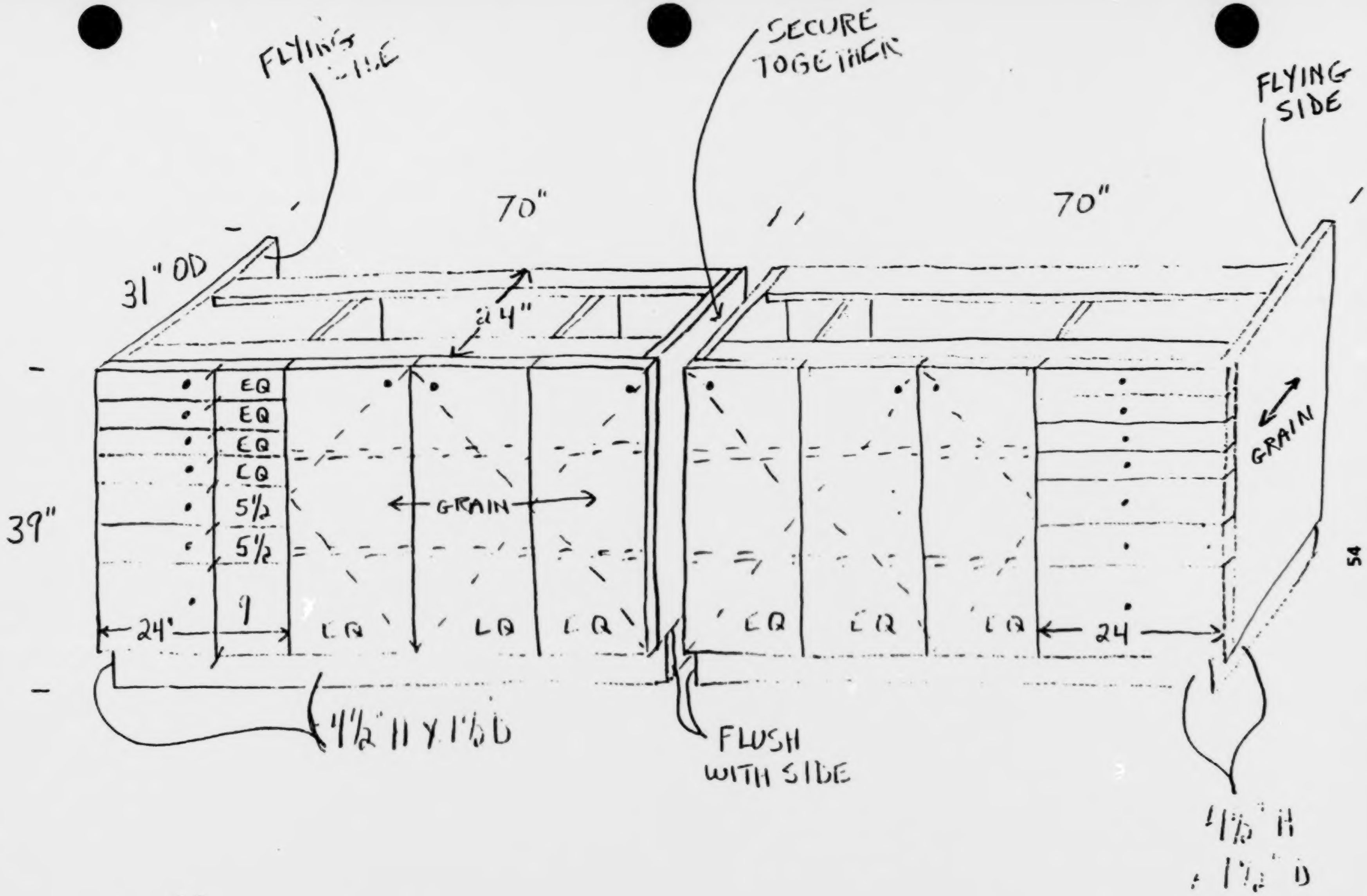

61 3/4"
24"
#932 ANTIQUE WHITE
MATTE
TITE JOINT FASTENERS
1"


90½"
22"
39"
GRAIN
← GRAIN →
THIS IS THE
FORWARD DOOR
1½" X 1½"
2 SLIDING DOORS

4 ADJ SHELVES
1½" THICK
EARA ON
UNDERSIDE

Ⓐ

Columbia


FLYING SIDE
SECURE TOGETHER
FLYING SIDE
70"
70"
31" OD
24"
39"
EQ
EQ
EQ
EQ
5½
5½
9
24"
EQ
EQ
EQ
EQ
EQ
EQ
24
GRAIN
GRAIN
4½" H X 1½ D
FLUSH WITH SIDE
4½" H
X 1½" D

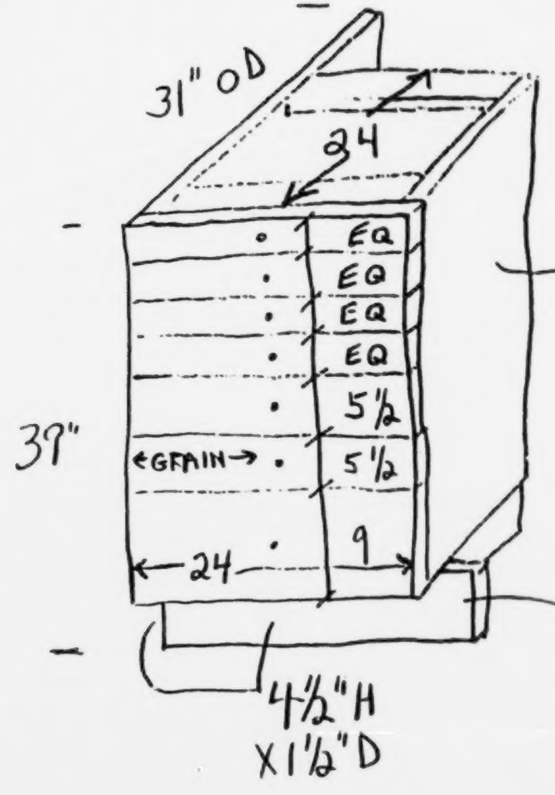
54

63

(C)

64

Columbia


31" OD
24
EQ
EQ
EQ
EQ
5½
5½
9
39"
←GRAIN→
24
4½"H
X1½"D

SECURE TO
ADJOINING
CABINET

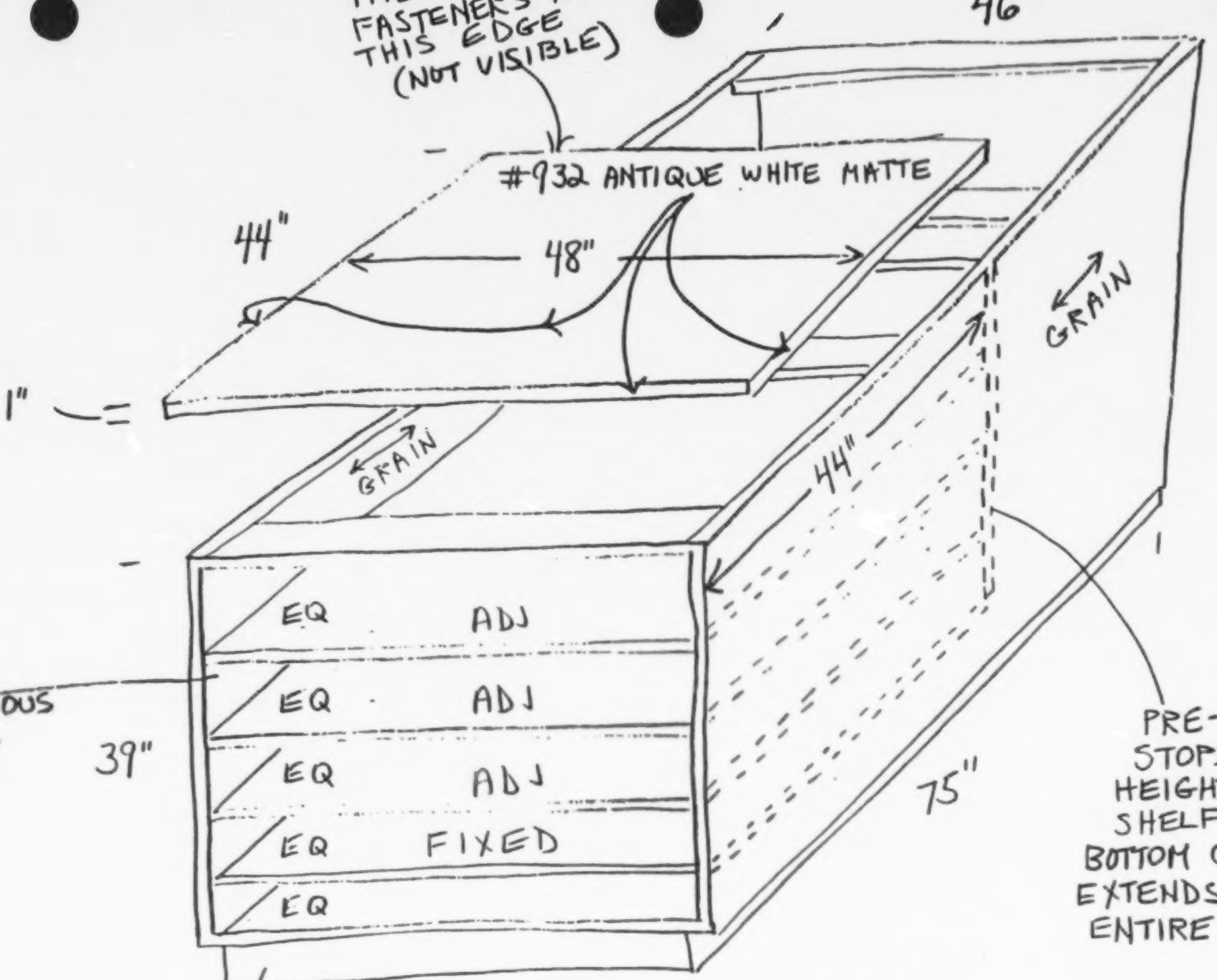
FLYS TO
MEET ADJOINING
BASE

65

66

Ⓓ

Columbia


46"
44"
48"
1"
GRAIN
GRAIN
44"
39"
75"
EQ
ADJ
EQ
ADJ
EQ
ADJ
EQ
FIXED
EQ

TITE JOINT FASTENERS AT THIS EDGE (NOT VISIBLE)

#932 ANTIQUE WHITE MATTE

LEAVE BASE OFF DURING DELIVERY

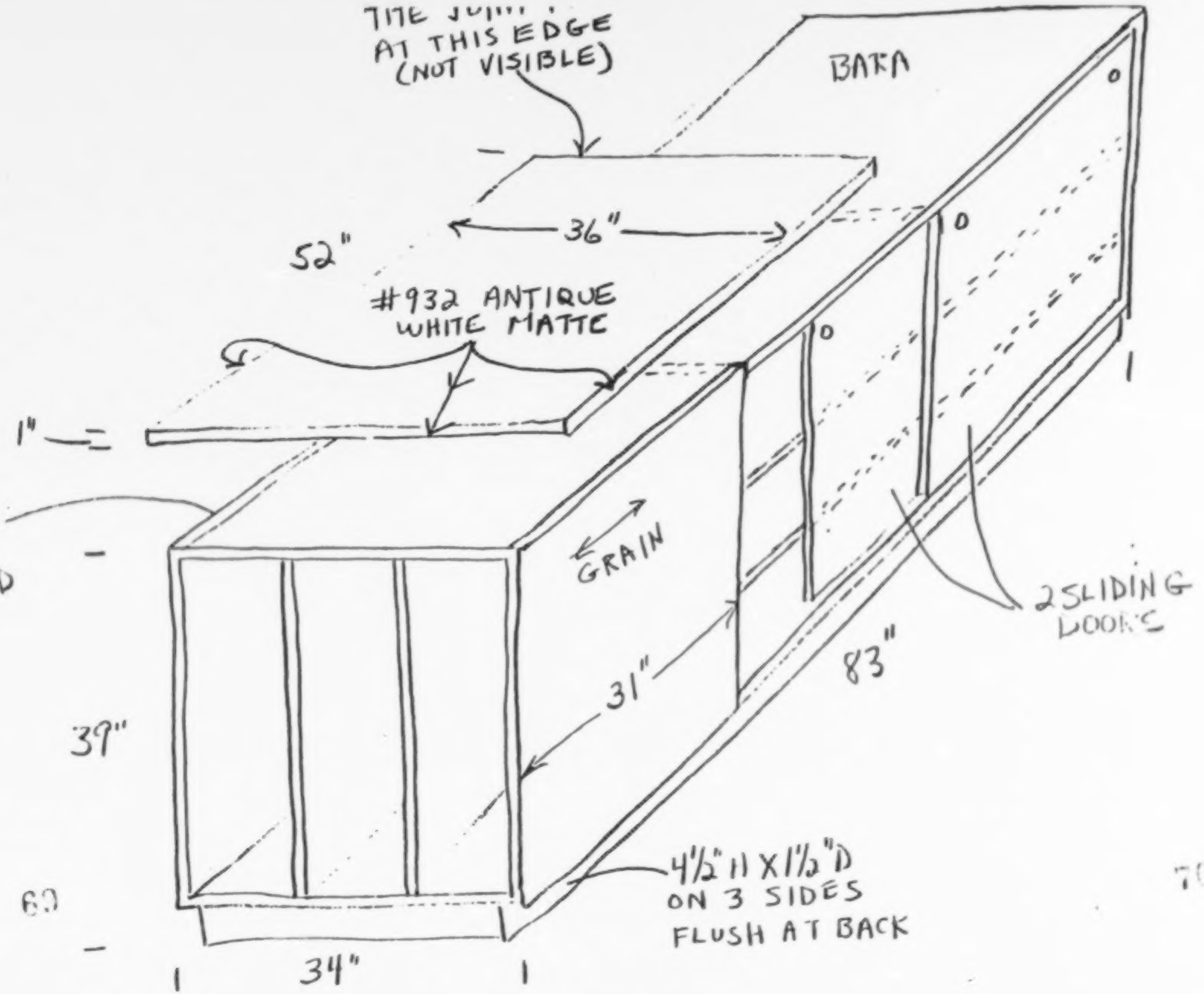
CONTINUOUS HOLES 1" OC

PRE-BACK STOPS AT HEIGHT OF FIXED SHELF THUS BOTTOM COMPARTMENT EXTENDS THE ENTIRE LENGTH

4½" x 1½"D ON 3 SIDES FLUSH AT BACK

(E)

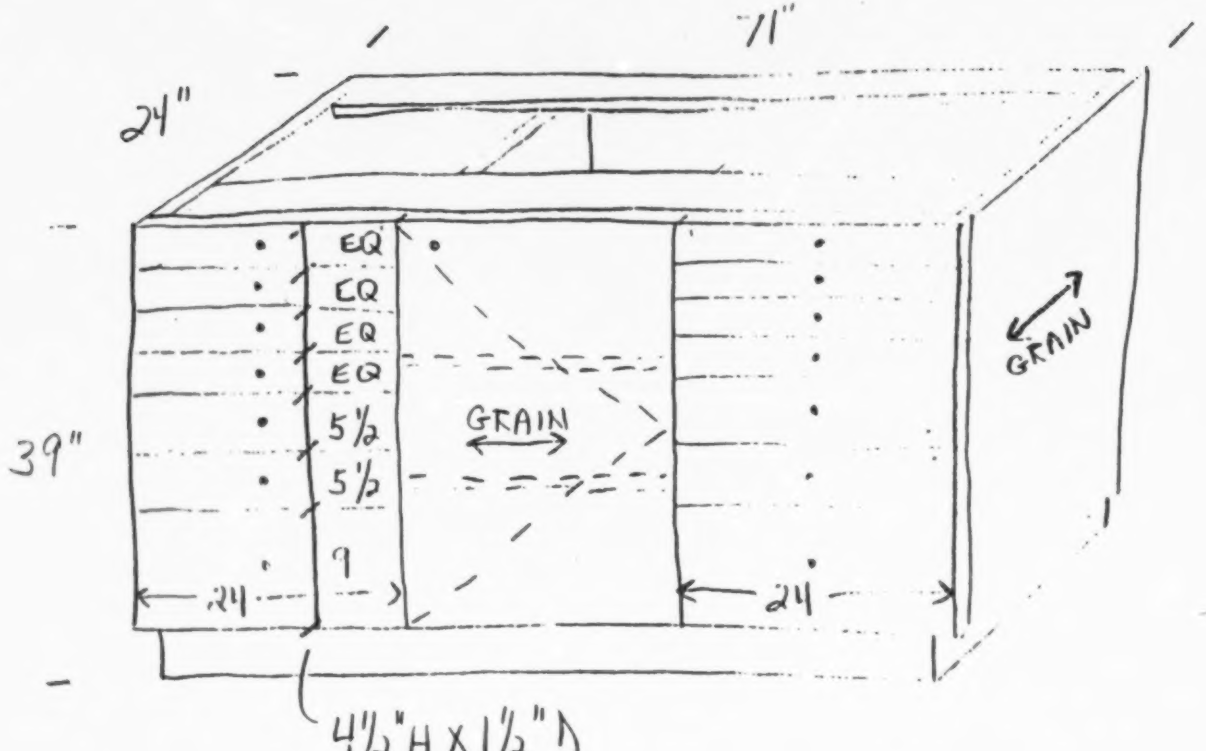
Columbia


THE JOINT
AT THIS EDGE
(NOT VISIBLE)
BACK
36"
52"
#932 ANTIQUE
WHITE MATTE
1"
THIS
SIDE IS
FINISHED
GRAIN
2 SLIDING
DOORS
83"
31"
39"
4½" H X 1½" D
ON 3 SIDES
FLUSH AT BACK
34"

69

70

Columbia

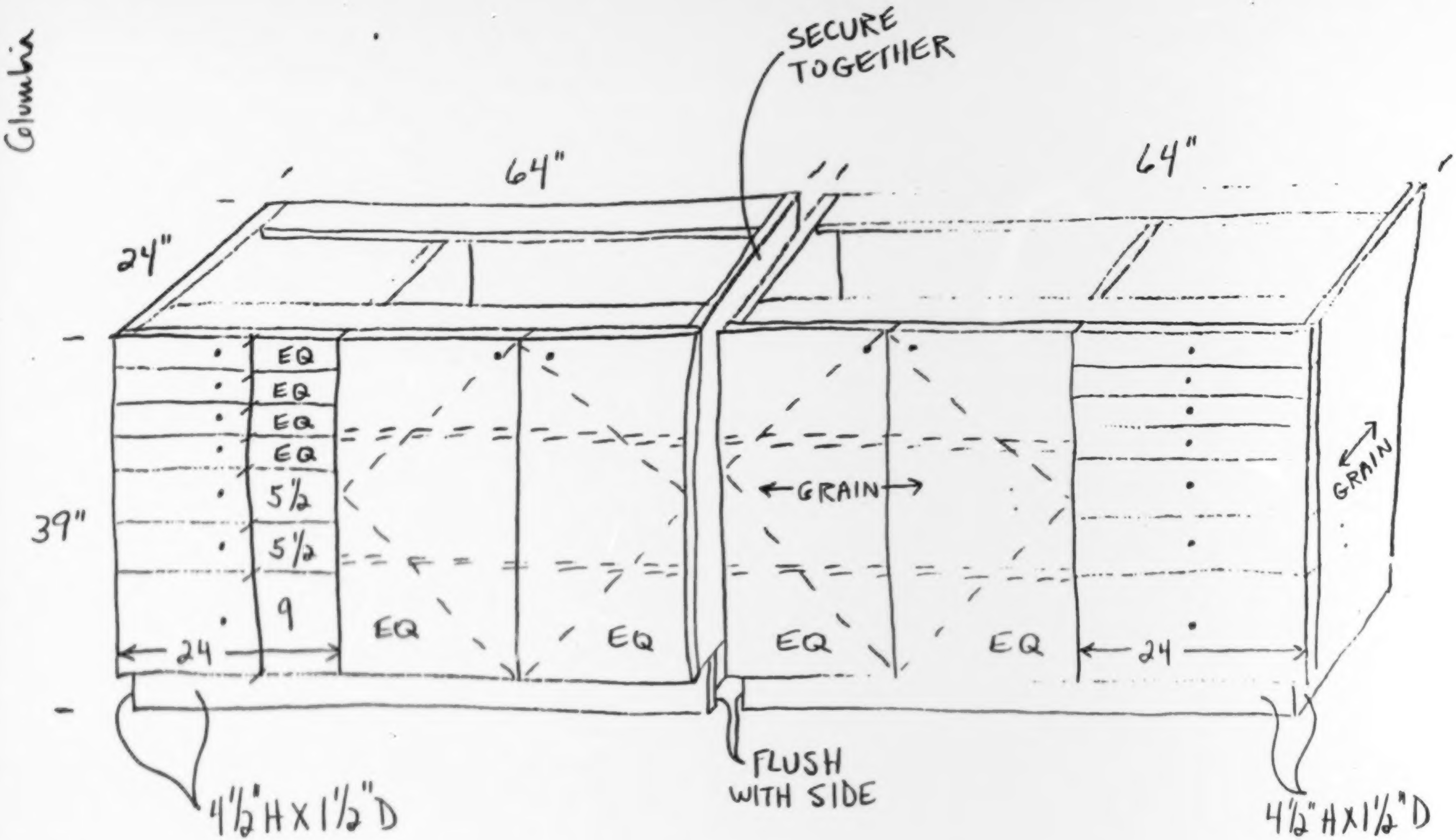

71"
24"
39"
EQ
EQ
EQ
EQ
5½
5½
9
GRAIN
GRAIN
24
24
4½"H X 1½"D

71

72

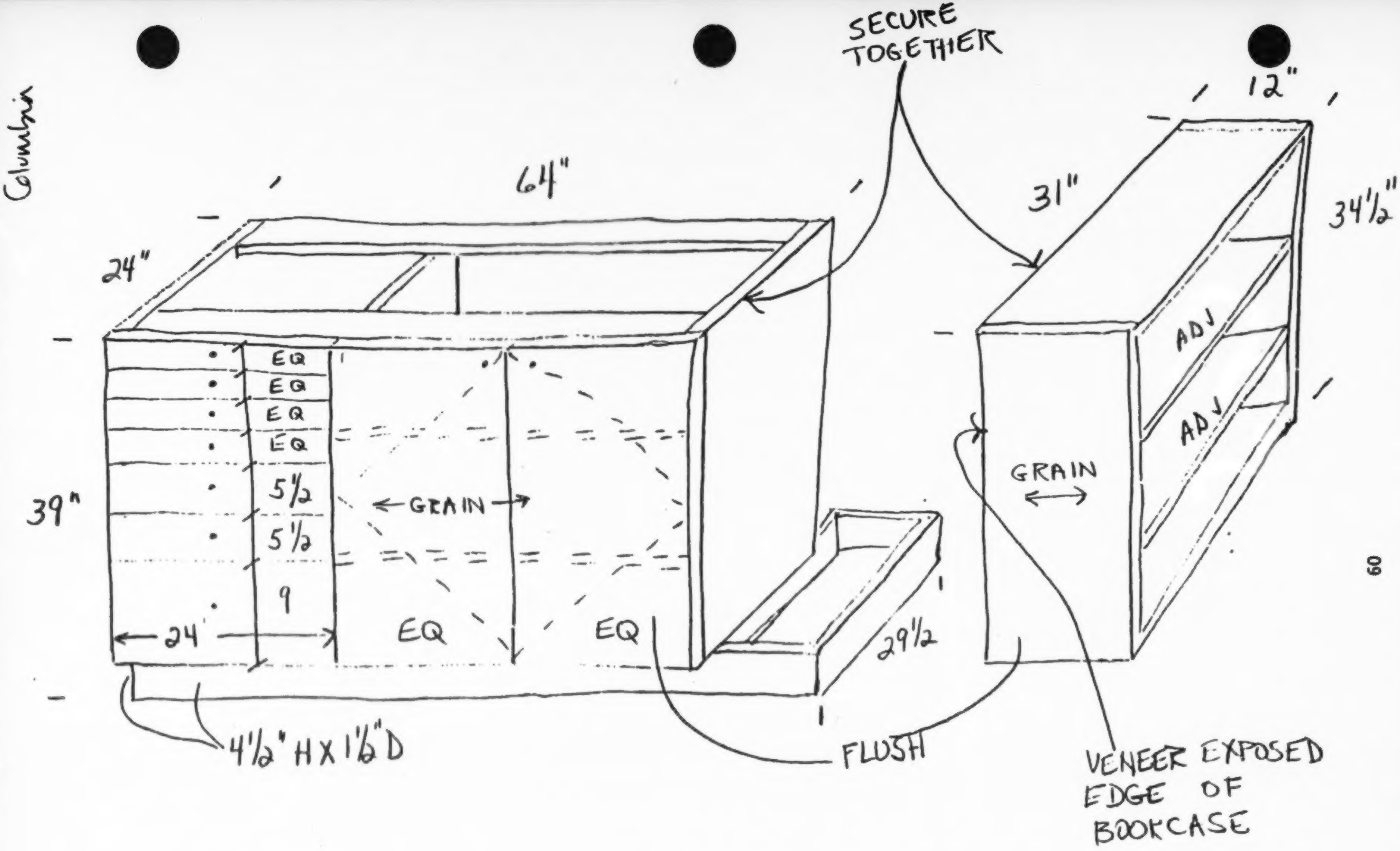
Ⓖ

Columbia


SECURE TOGETHER
64"
64"
24"
39"
EQ
EQ
EQ
EQ
5½
5½
9
EQ
EQ
EQ
EQ
←GRAIN→
GRAIN
← 24 →
← 24 →
FLUSH WITH SIDE
4½"H X 1½"D
4½"H X 1½"D

Ⓗ

Columbia


SECURE TOGETHER
12"
64"
31"
34½"
24"
EQ
EQ
EQ
EQ
5½
5½
9
ADJ
ADJ
39"
←GRAIN→
GRAIN ⟷
24
EQ
EQ
29½
4½" H X 1½" D
FLUSH
VENEER EXPOSED EDGE OF BOOKCASE

60

75

(I)

76

Columbia

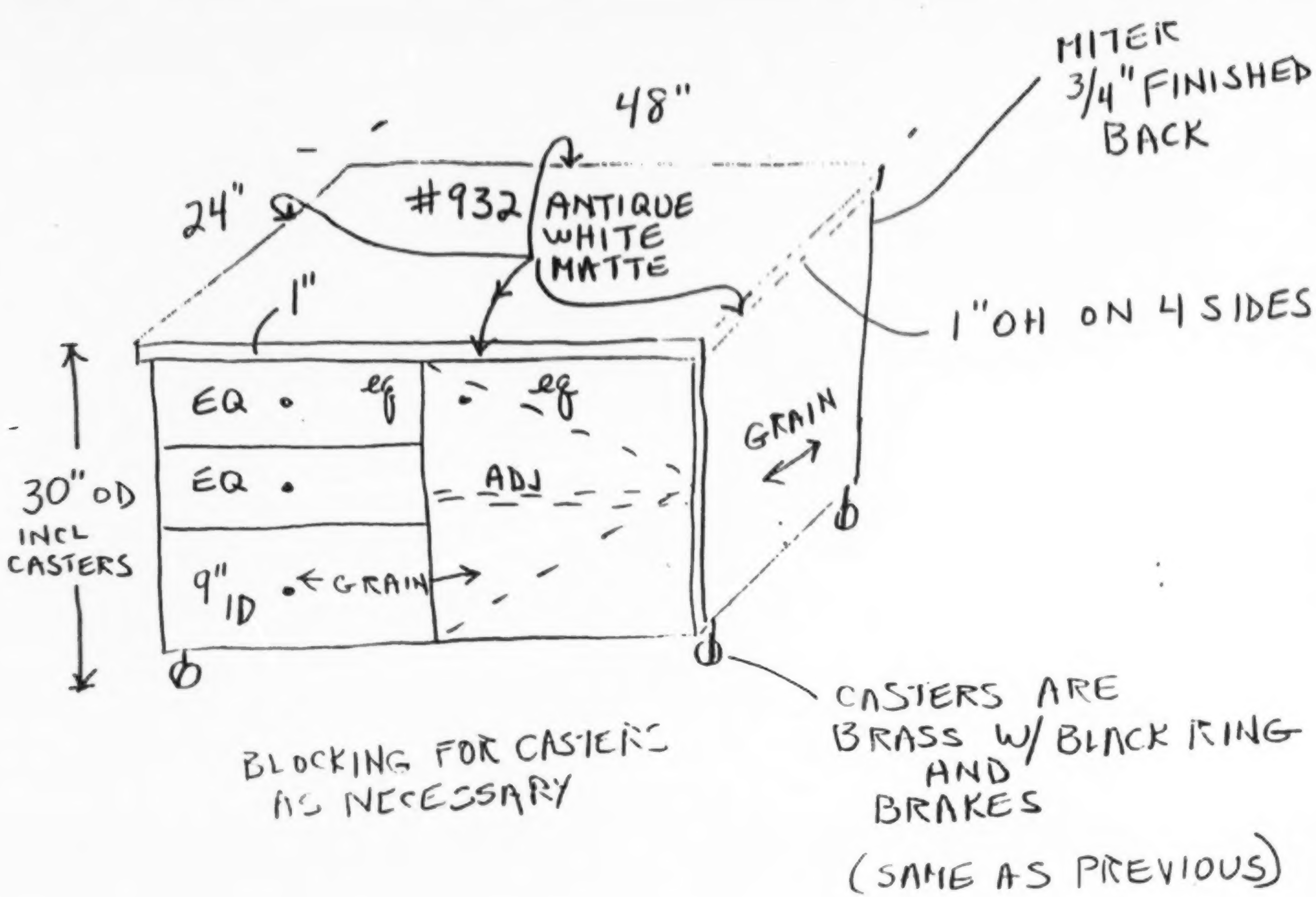
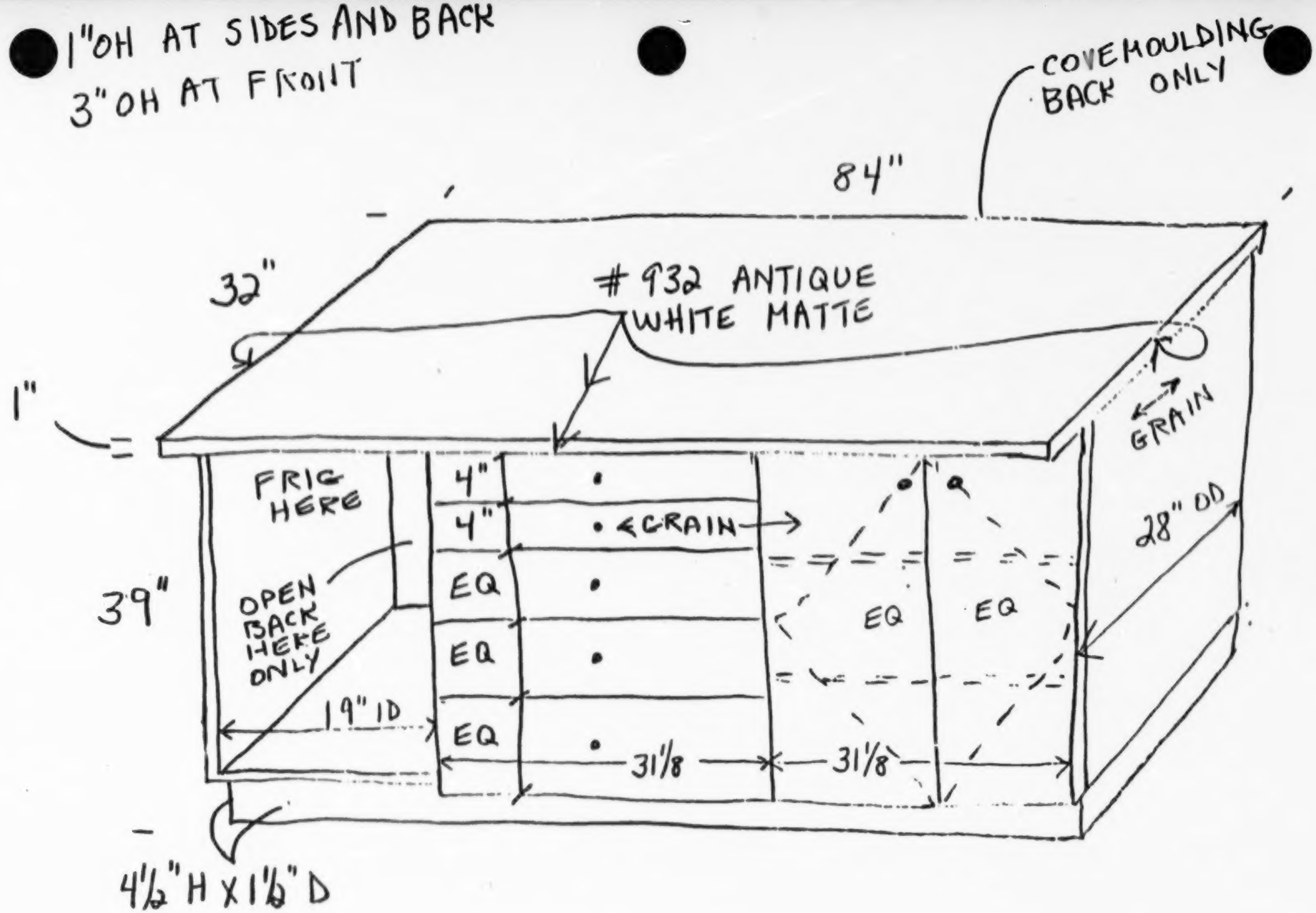

48"
24"
#932 ANTIQUE WHITE MATTE
1"
MITER 3/4" FINISHED BACK
1" OH ON 4 SIDES
EQ
eq
eq
EQ
ADJ
9" ID
← GRAIN →
GRAIN
30" OD INCL CASTERS
BLOCKING FOR CASTERS AS NECESSARY
CASTERS ARE BRASS W/ BLACK RING AND BRAKES
(SAME AS PREVIOUS)

PHOTO STAND

Columbia



1"OH AT SIDES AND BACK
3"OH AT FRONT

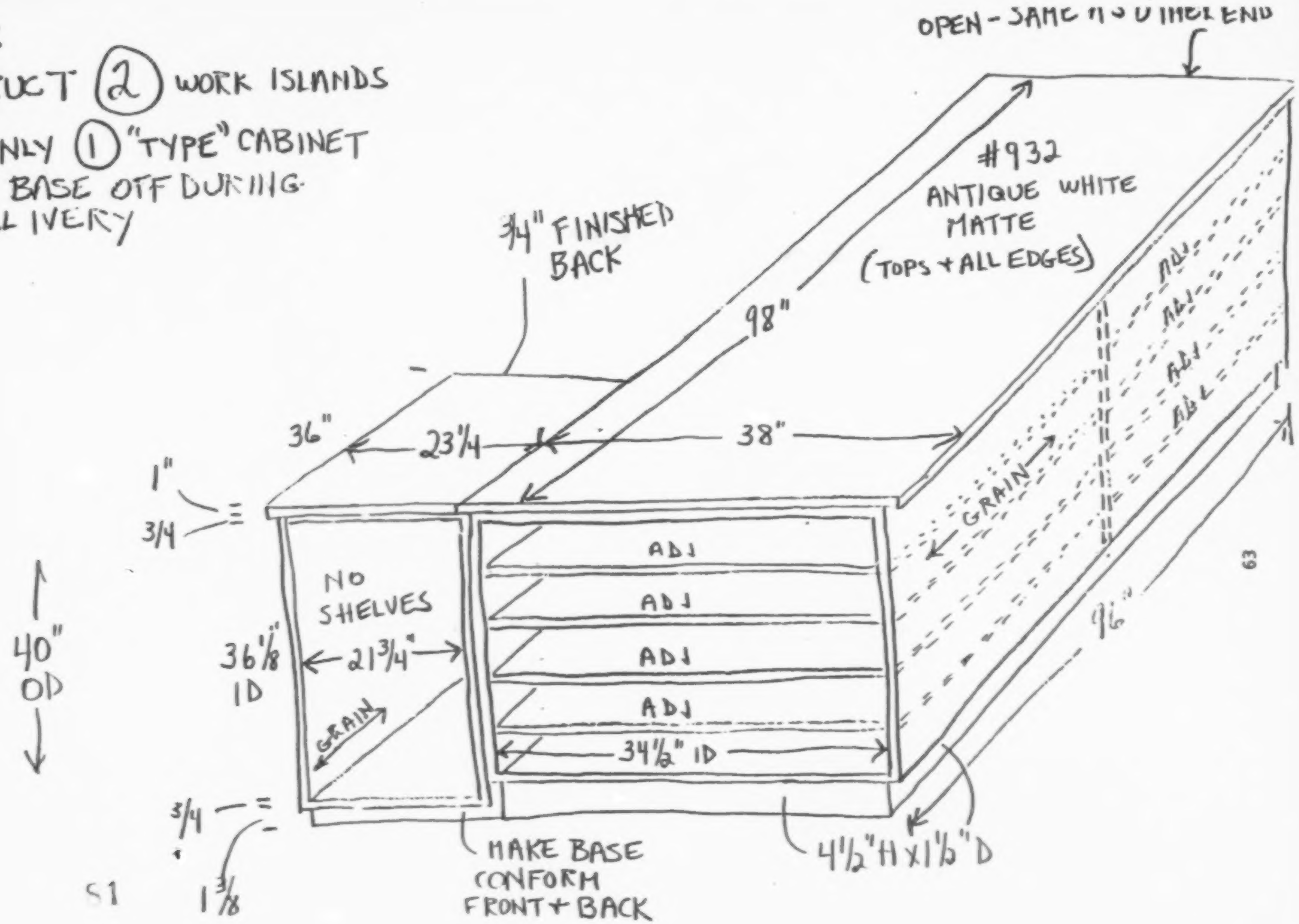
COVE MOULDING
BACK ONLY
84"
32"
#932 ANTIQUE
WHITE MATTE
1"
GRAIN
FRIG
HERE
4"
4"
EQ
EQ
EQ
GRAIN
EQ
EQ
28" OD
39"
OPEN
BACK
HERE
ONLY
19" ID
31⅛
31⅛
4½"H X 1½"D

BACK ROOM WORK BENCH

79

80

NOTE:
- CONSTRUCT ② WORK ISLANDS
BUT ONLY ① "TYPE" CABINET
- LEAVE BASE OFF DURING DELIVERY


OPEN - SAME AS OTHER END
#932
ANTIQUE WHITE
MATTE
(TOPS + ALL EDGES)
3/4" FINISHED BACK
98"
36"
23 1/4
38"
1"
3/4
40" OD
36 1/8" ID
NO SHELVES
21 3/4"
GRAIN
ADJ
ADJ
ADJ
ADJ
34 1/2" ID
GRAIN
ADJ
ADJ
ADJ
ADJ
96"
3/4
1 3/8
MAKE BASE CONFORM FRONT + BACK
4 1/2" H x 1 1/2" D

Columbia

81

63

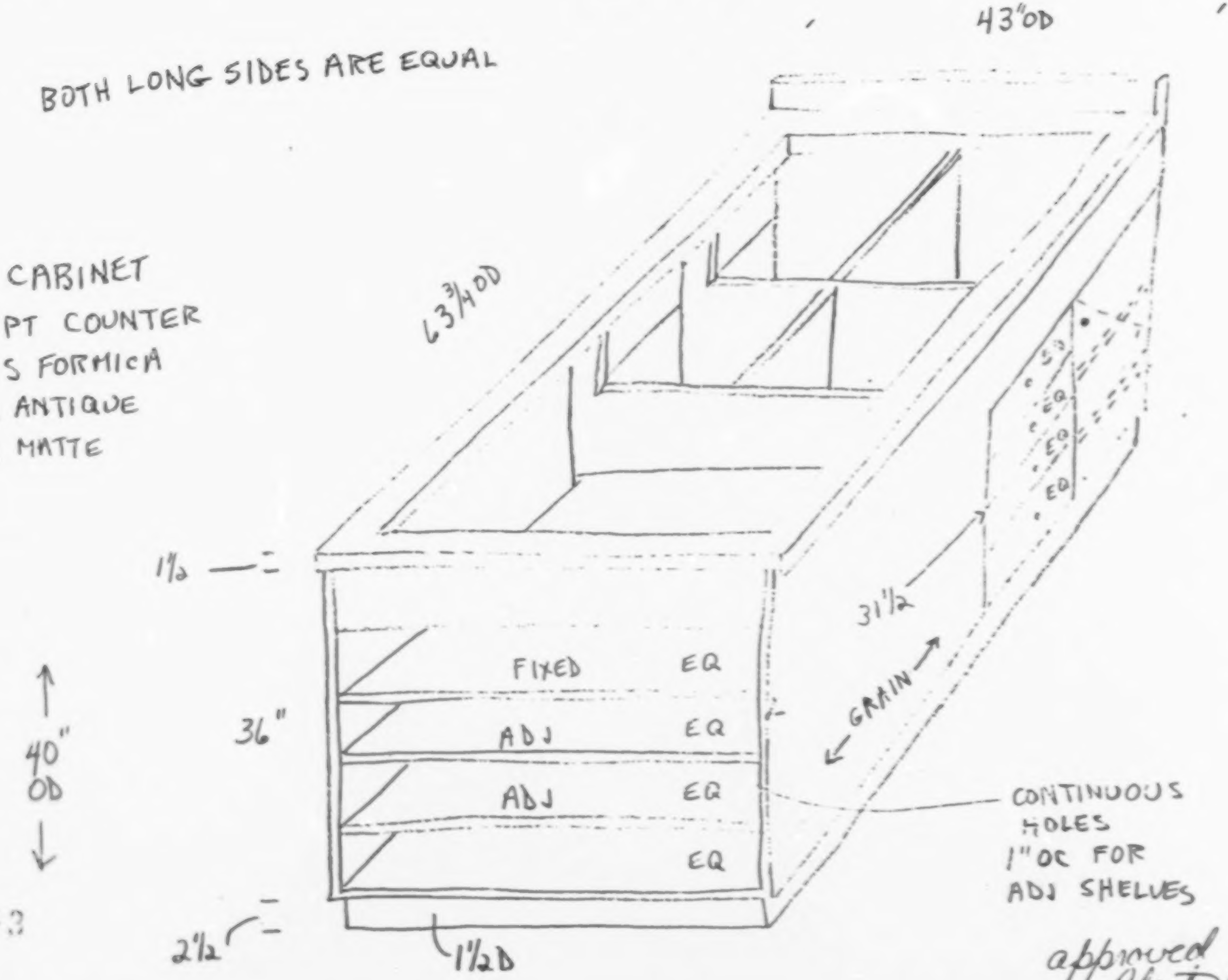
82

WORK ISLAND WITH "TYPE" CABINET ALONGSIDE

Columba

BOTH LONG SIDES ARE EQUAL

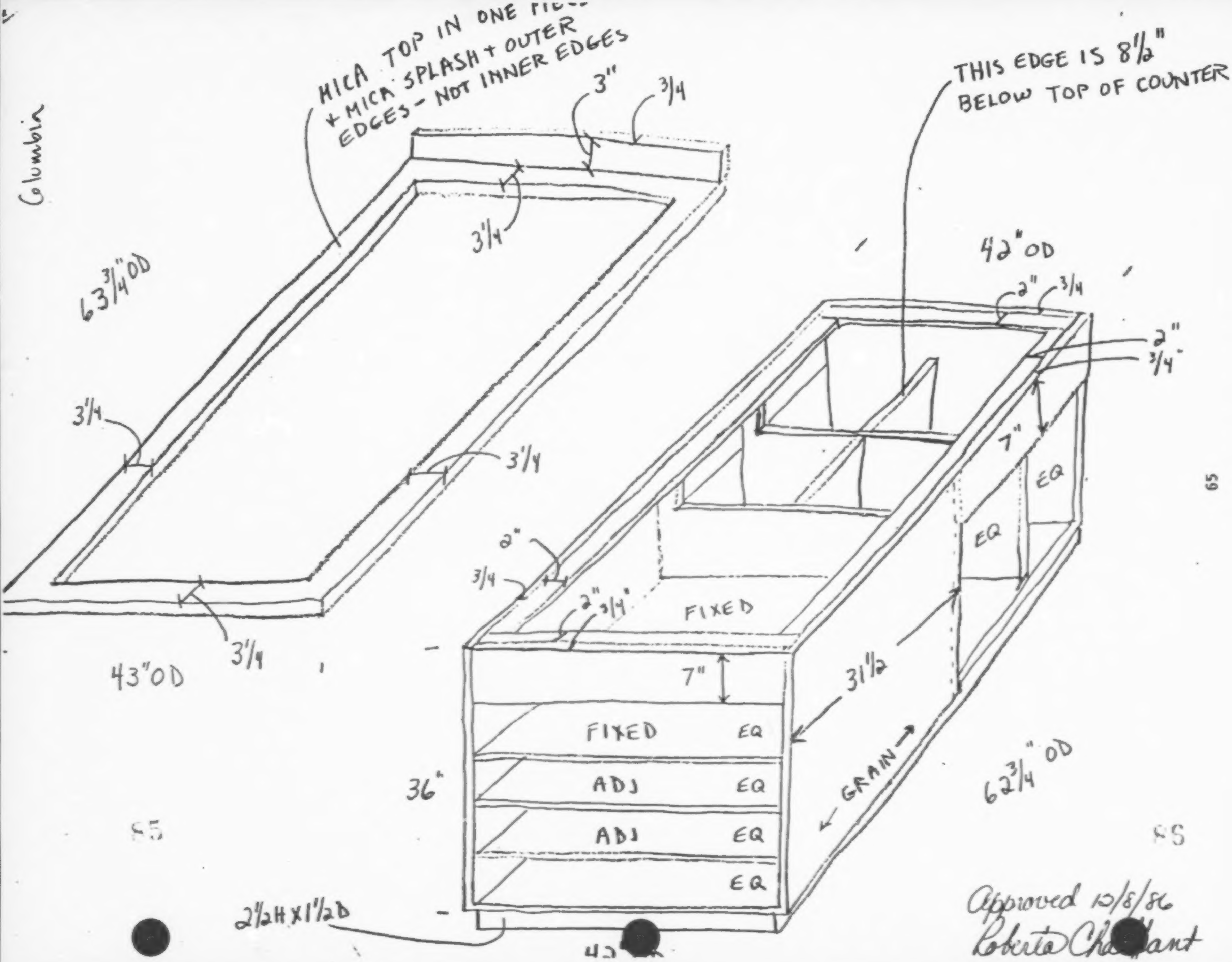
OAK CABINET
EXCEPT COUNTER
TOP IS FORMICA
932 ANTIQUE
WHITE MATTE


43" OD
63 3/4 OD
1 1/2
36"
40" OD
2 1/2
1 1/2 D
FIXED
EQ
ADJ
EQ
ADJ
EQ
EQ
31 1/2
GRAIN
EQ
EQ
EQ
EQ

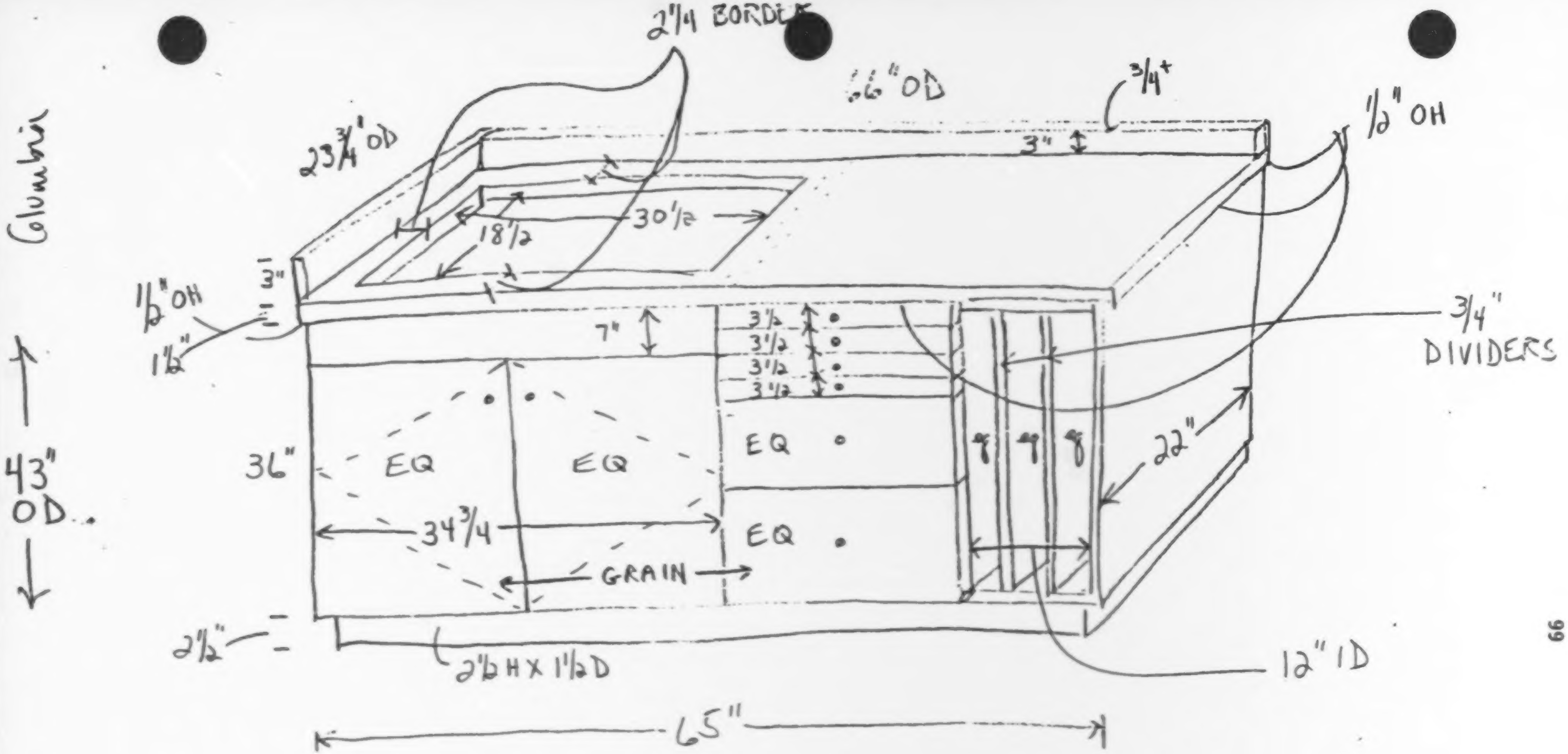
CONTINUOUS
HOLES
1" OC FOR
ADJ SHELVES

approved 12/8/86

Columbia

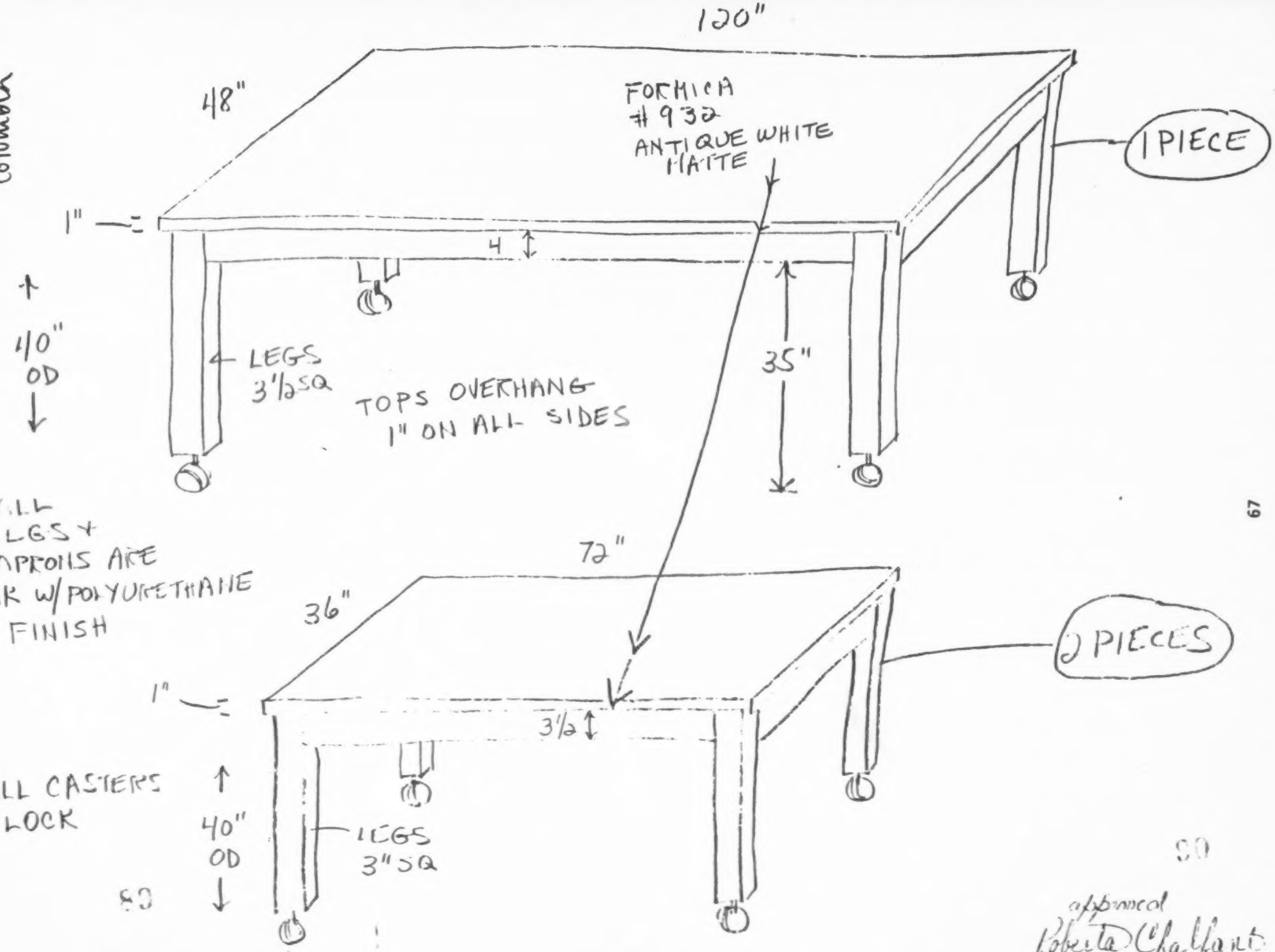

MICA TOP IN ONE PIECE
+ MICA SPLASH + OUTER EDGES - NOT INNER EDGES
3"
3/4
3 1/4
63 3/4" OD
3 1/4
3 1/4
3 1/4
43" OD
THIS EDGE IS 8 1/2" BELOW TOP OF COUNTER
42" OD
2"
3/4
2"
3/4"
7"
EQ
EQ
2"
3/4
2"
3/4"
FIXED
7"
31 1/2
FIXED
EQ
ADJ
EQ
ADJ
EQ
EQ
36"
GRAIN
62 3/4" OD
2 1/2 H x 1 1/2 D
42

Approved 10/8/86
Roberta Cha[illegible]ant


Columbia
2 1/4 BORDER
66" OD
3/4+
1/2" OH
23 3/4" OD
30 1/2
18 1/2
3"
3"
1 1/2" OH
1 1/2"
7"
3 1/2
3 1/2
3 1/2
3 1/2
3/4" DIVIDERS
43" OD
36"
EQ
EQ
EQ
EQ
34 3/4
GRAIN
9
9
9
22"
2 1/2"
2 1/2 H x 1 1/2 D
12" ID
65"

approved 12/8/86
Roberta Chalfant

Columbia


120"
48"
FORMICA
#932
ANTIQUE WHITE
MATTE
1 PIECE
1"
4
40"
OD
LEGS
3½ SQ
35"
72"
36"
2 PIECES
1"
3½
40"
OD
LEGS
3" SQ

TOPS OVERHANG
1" ON ALL SIDES

ALL
LEGS &
APRONS ARE
OAK W/ POLYURETHANE
FINISH

ALL CASTERS
LOCK

approved
Roberta Chalfant
10/2

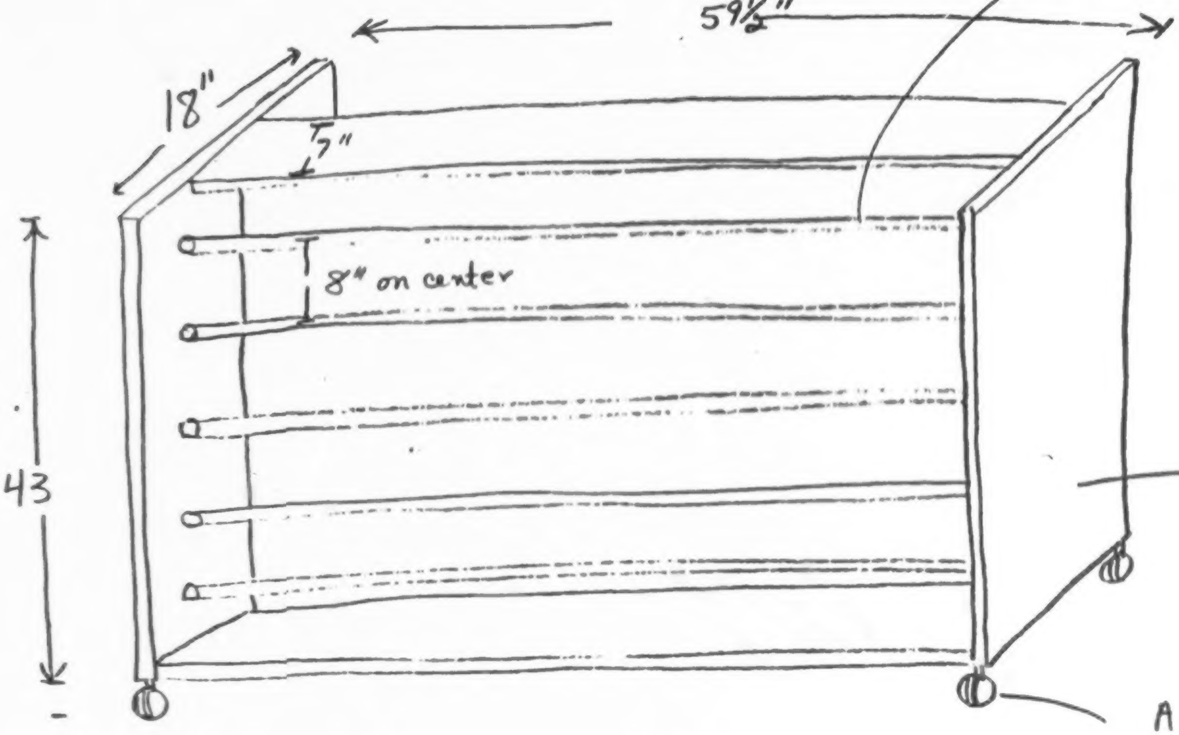
Columbia

OAK
w/ POLYURETHANE
FINISH

LONG ENOUGH
TO ALLOW FOR
56" LONG ROLLS

5 - 3/4 RODS
ON EACH SIDE
(ALL CAN BE
LIFTED OUT)

RODS ARE PLACED
TO ALLOW 8" DIA
ROLLS



3 PIECES

89

ALL CASTERS
LOCK

BOTH SIDES ALIKE

91

92

approved
Roberta Chalfant
10/23/86

Berkeley

BASIC BENCH SET UP FOR CONSERVATION TECHNICIANS

TOOLS	COST EST.	SUPPLIER
awl	$8	Gane Brothers & Lane Bookmakers Bookbinder's Warehouse Talas
bone folder	$5	G, BM, BW, T
brush, fine-line	$6	Aiko's
brush, draftsman's duster	$3	local hardware/art store
brush, fan #2	$4	local art store
brush, bridle (round)		
#10	$6	Talas
#20	$11	Talas
brush, bright		
#4 Gainsborough	$5	Local art store
#8 Gainsborough	$6	Local art store
brush, utility UB1	$7	Aiko's
eraser, Staedtler	$.80	Local art store
glue syringe	$4/for 3	Garrett Wade
knife, oyster (staple extractor)	$7	Gane Brothers & Lane University Products
knife, paper #1	$5	Gane Brothers & Lane
knitting needle 2 sizes	$1	Local notions store
microspatula, 8" long double blade	$2	Talas, VWR Scientific, Fisher
pliers, diagonal cutting 5" long	$7	Local hardware store
ruler, 6" stainless	$2	Local hardware/art store
ruler, straight edge 18" spring tempered	$10	Local hardware/art store
sandpaper holder w/ sandpaper	$7	Local hardware store

Berkeley

scalpel handle #3 or #4 and blades	$20	VWR Scientific, Fisher University Products
scissors, Needlecraft 4 3/4"	$14	Corrado Cutlery
sewing needles #3	$2	Local notions store
shears, rug	$23	Corrado Cutlery
tacking iron, Sealector	$50	University Products Talas
tweezers, forceps dumont style #1,5,7	$16	McCrone Accessories VWR Scientific, Fisher
wash bottle, 125ml	$10/per 6	VWR Scientific, Fisher

SUPPLIES	COST EST.	SUPPLIER
paste, Japanese pre-cooked, Fueki	$18	U.C. Berkeley, via Kimura Gallery
PVA		University Products Talas, Bookmakers
linen thread, Barbour's 16-2 or 18-3	$25	Bookbinders's Warehouse Bookmakers
sewing tape, 1/2"x36yd unbleached cotton	$8	Gane Brothers & Lane
backing flannel, super roll of 100 yds.	$166	Gane Brothers & Lane
ace bandages, 21/2" wide	$5	Local drug store
reemay, roll 38" wide 50yds	$28	Talas
silicone release paper 24"x36" sheet	$.45	Talas
Mohawk Superfine text soft shite eggshell 80lb long grain, carton 1000 sheets 25"x38"	$.37/sheet	The Paper Source

Berkeley

tyvek, 5.6 mls(thin)	$.50/ft	Transilwrap West Corp.
tyvek, 7.5 mls(thick)	$.40/ft	Transilwrap West Corp.
tyvek envelopes various sizes	$35-$70/100	University Products
Japanese paper Kizukishi Sekishu Kozogami Turu Hosokawa Ohban Tengujo T-3 Kozu white		Bookmakers, Aiko's
Fusion 4000 adhesive		

INDIVIDUAL SUPPLIES INVENTORY

Each Conservation employee (technician or student assistant) has a box of small handtools for use in repairing books. Each person is responsible for maintaining the tools in their box. All tools must be accounted for at year's end.

TOOLS:
2 Bone folders:
    1- rounded on both ends; 1- rounded on one end, pointed on the other
3 Paste brushes -- round, made of natural bristle
    #2 -- quarter-inch diameter; #4 -- half-inch diameter; #8 -- five-eighths inch diameter
1 Bench brush--large
1 Shop cloth
1 Acrylic eraser
1 Needle
1 Pencil
1 Scalpel handle
    Scalpel blades
1 Pair scissors
1 OPALINE pad
optional: 1 water tear implement

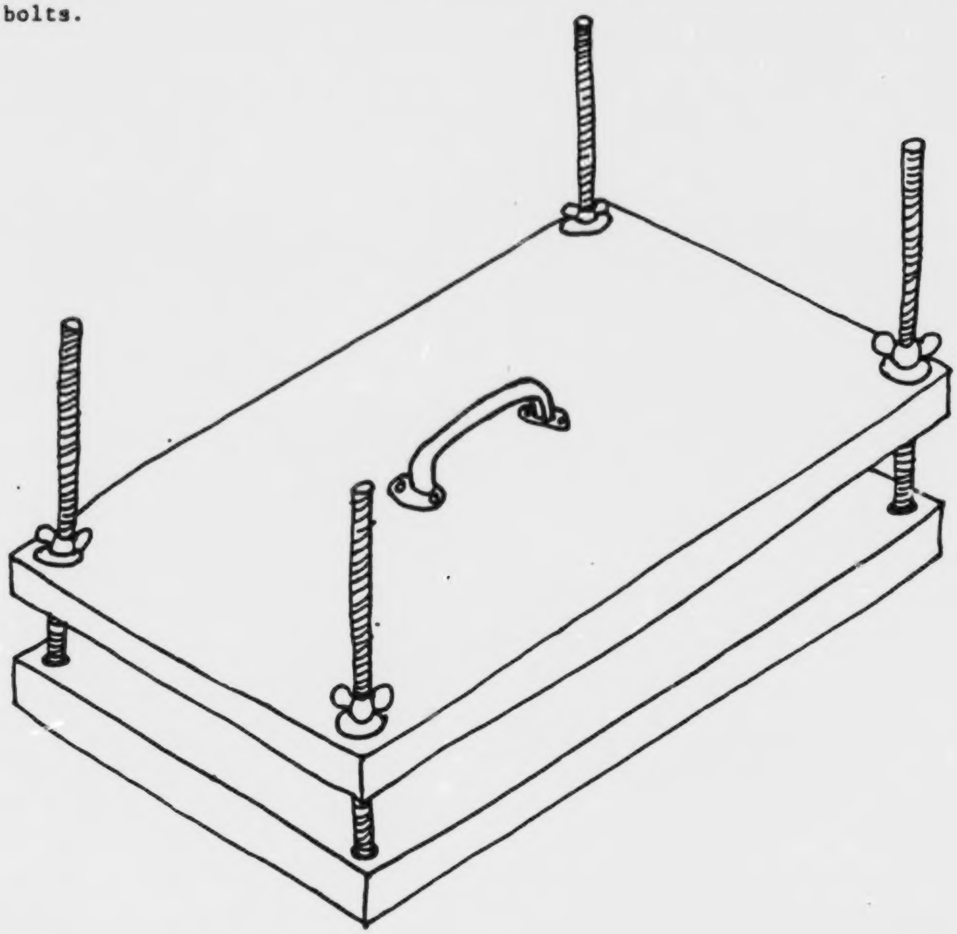
Each repair bench is equipped with most of the tools and supplies necessary to do routine book repairs. Because different people could be using a bench throughout the day, benches must be kept clean and neat at all times. Work in progress cannot be kept on the bench (must be moved to "In Progress shelves" at the end of each employees shift). The primary user of each bench is responsible for maintaining and restocking bench supplies.

BENCH EQUIPMENT:
1 Awl
    Weights:
        Glass: 2 small, 1 long; Paper-wrapped marble: 6 - 10 pieces, various sizes
1 Glue pot (Plastic air-tight container)
3 Rulers:
        12" cork-backed metal;
        also with millimeters: 18" metal double-sided, 36" metal double-sided
3 Templates: 3/4", 1", 30mm
1 Self-healing cutting mat
1 Book press
1 Sample packet identifying the various bookcloths and buckrams
1 Desk lamp

SUPPLIES:
1 Roll of Reinforcement ribbon
8 Japanese tissues:
        assortedweights and tones, cut/torn into 1" wide strips
    Scrap paper
    Blotter paper--cut into 3" wide strips
    Polyester strips (REMAY)
    Sille board
    Support boards: approx. 6" x 8"
    Waxed paper
    Tattle tape

A HOME-MADE BOOK PRESS

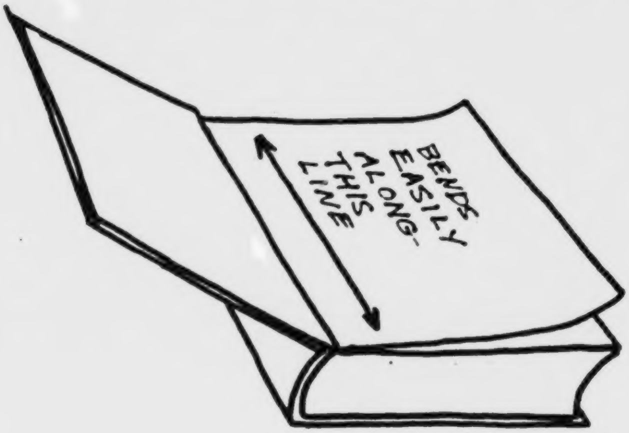
A simple book press can be made from two 3/4" boards and four 3/8" or 1/2" bolts.



Anchor the heads of the bolts under the lower board and use washers and wingnuts above to tighten the press. The handle makes it easy to lift the top for positioning books. The lenghth of the bolts determines how many books can be pressed at one time.

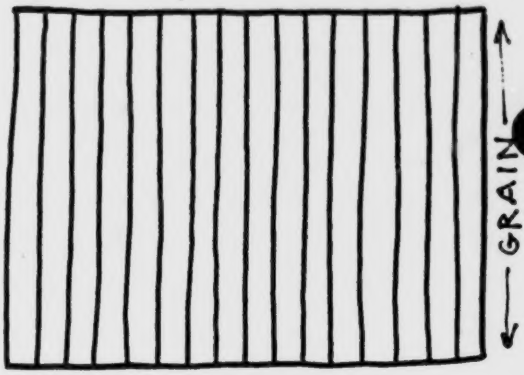
MATERIALS USED IN BOOKS

The materials used in books and in their repair have unique behavior patterns that effect how a book functions. You need to understand and identify these characteristics in order to make good repairs.



The Grain of Paper

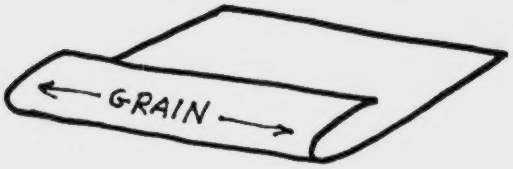
One of the most important characteristics you will deal with continually is the "grain" of paper and binder's board. This means that these materials fold or bend more easily in one direction than in the other direction. For a book to function well the pages must turn (fold over) easily. In other words, the "grain" is parallel to the spine of the book.

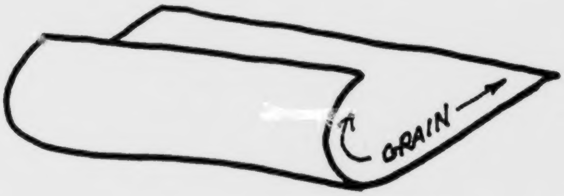


Three ways to find the grain of paper:

Visually. Many papers, including most Japanese tissues, have lines called "chain" lines (see illustration) that are lighter than the rest of the paper and are about 1" apart and visible when the paper is held up to the light. The grain is always parallel to these lines.

Bending. This is perhaps the most common way to find the grain. Bend the sheet over in one direction and then in the other direction and feel the resistance. The direction with least resistance is the direction of the grain.





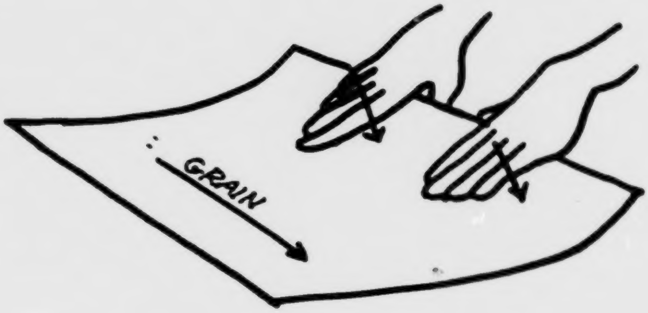
Wetting. Cut a small square of paper and moisten it on one side. The paper will curl into a tube, indicating that the grain is parallel to the length of the tube.

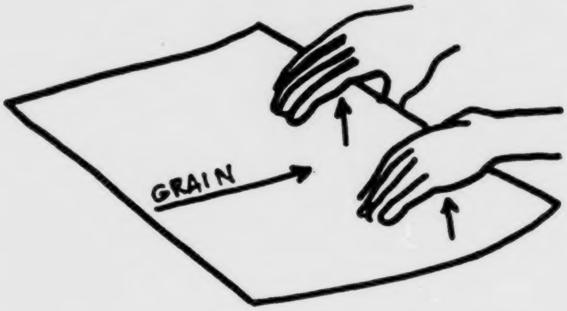
Covering Materials

We use several kinds of thick paper products for making cases and protective enclosures - binder's board, museum board and library board. Like paper, board has a "grain", however, the method for determining the grain is somewhat different.

Board. Place the board on a flat surface and bend one edge with your thumb underneath the board and your fingers on top. The board will bend more easily in one direction than in the other, but because of the thickness of the material the bend will not be as great as paper.

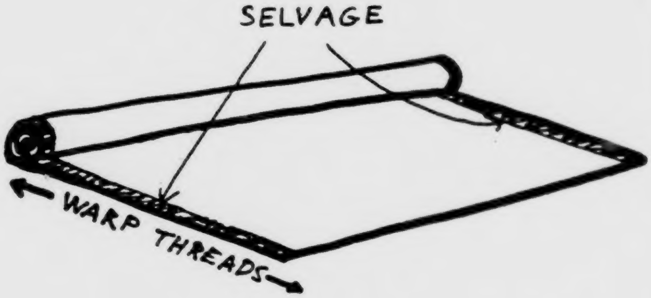
The palm of your hands and fingers will curve with the board when bending with the grain.



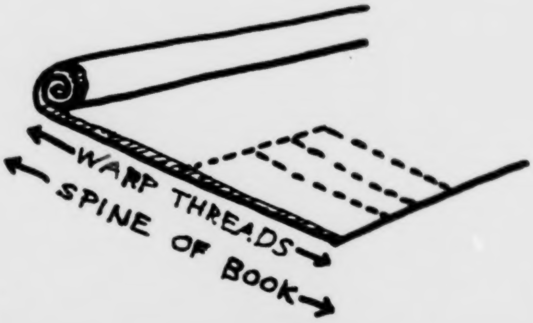


When bending across the grain, your your hands will cup away from the board.

Cloth. Cloth cannot be said to have a grain, but it does fold more easily along the long warp threads parallel to the length of the roll. Look for the selvage edge. It is in the direction of the warp threads.



The cloth used in a binding should be cut so that the warp threads run parallel to the spine of the book.



Adhesives

In the UC conservation unit we use several kinds of adhesives - PVA, methyl cellulose, and paste. Each has different properties and different uses that you should be aware of.

PVA, a polyvinyl acetate emulsion, is a good all-around adhesive. It is white (or slightly cream colored). Because it has a relatively low moisture content, it dries quickly creating a flexible bond and the paper it is applied to will cockle only moderately, if at all. However, because PVA dries quickly you will not have a lot of time to complete a procedural step. For example - lift and realign a piece of paper or cloth.

The PVA we use is Jade 403. It is thick and is thinned with water or combined with methyl cellulose. The container of undiluted PVA is on the first shelf next to the sink.

Methyl Cellulose is a vegetable adhesive. The crystals mixed with water make a translucent substance. It is slow drying and does not have very strong bonding qualities, therefore, it is mixed with PVA to make a mixture.

Preparation is done in the following manner:

2 Cups tap water
2 teaspoons MC sprinkled on the water and wisked to mix.
Let stand. The crystals will slowly absorb the water.
From time to time mix until it is the consistancy of egg white.
Place in the labeled jar on the first shelf next to the sink.

Mixture is approximately 60% PVA and 40% methyl cellulose. It extends PVA and gives you more time in which to complete a step.

Uses for PVA and Mixture:

Attach pockets to the inside of covers
Tip in, attaching labels
All steps of spine repair and rebacking
Making a new case
Attaching enclosure parts together
Tighten books in their cases

Paste is made with either pre-cooked wheat starch, rice or corn starch. Pre-cooked wheat starch is sprinkled on water and beat with a wisk until the desired consistancy is reached. Uncooked starch is mixed with water and cooked to the desired consistancy. Because paste molds easily, either mix a small amount that will be used the same day or add o-Phenylphenal, a preservative, when the paste is completed. The student supervisor or a student who has learned how to make paste will show you how to do this.

Paste dries slowly, will stretch and cockle paper, and it is easily removed with water.

Uses for paste: Cleaning spines of bookblocks (the paste must be very thick)
Backing fragile paper (paste is a thin consistency)

Wheat Paste with Mixture. This combination is being used by most conservators as an "all around" adhesive for paper. It has the reversibility of paste, but also the quicker bonding of mixture. When the wheat paste is prepared, add about a third more mixture and mix thoroughly. Use it as you would paste by itself.

Uses for Three-part Mixture:

- Hinging in loose plates and pages
- Guarding signatures with Japanese paper
- Repairing tears with Japanese paper
- Putting down endpapers on the underside of the cover

Care of Tools and Equipment

Your cooperation in keeping order and cleanliness in the department is needed and appreciated. The tools listed below are yours to use while you are working in the conservation unit. You are responsible for their care. When you are not using them they are to be kept in their container and put on your "work in process" shelf.

- Bone folder
- Scalpel
- See-through and metal ruler
- Spatula
- Paring knife
- Scissors, large and surgical
- Potter's needle
- 1", ½" and ¼" Brushes
- Small water color brush
- Dividers
- Tweezers
- Sewing Needles
- Erasers - Pink Pearl
  - Magic Rub
  - Mars Plastic

All other tools are in the gray cabinet or on the peg board above the work benches.

At the end of each day wash your bone folder, knife and brushes with soap and water. It is important that ALL adhesive be removed from the bristles. If adhesive build-up is not checked, the bristles become hard and the brush is impossible to use.

Maintaining Your Work Space

When you stop working for the day, put the books you are working on and your hand tools on your shelf. Throw away all paper used for pasting, etc. Wipe the area clean. Center the half sheet of binder's board with several sheets of clean waste paper on top so that the space is ready for the next worker.

Department Procedures

Here are ways to make the unit a more pleasant and productive place to work:

Do not eat or drink in the conservation area. Kindly wash your hands after eating - greasy/sticky fingers stain paper and bindings.

Respect others working by not spreading what you are working on around the department.

Put all waste paper and scraps of cloth that are no longer useable in the trash bins.

When cutting cloth off a roll, cut it the width of the roll and at least 24" long. Take what you need from this piece and roll the remaining part back into the roll. Smaller pieces are put in folders marked by color in the drawer labeled "Cloth Scraps".

Cincinnati

When asked, help pick up, wash sink and counter space, tidy paper drawers and generally assist in keeping the conservation area clean.

Put weights and pressing boards on the first shelf next to the telephone after using them.

As a safety precaution, put the blade of the board shear down when not in use.

Be sure to remove all staples and clips from materials being cut on the board shear or guillotine so that the blade will not be nicked.

2

Book Structures and Basic Working Methods

The section provides information needed by the technician before beginning actual conservation treatments. It includes brief overviews of common book structures encountered in general library collections, instructions for preparing conservation supplies and for some basic working techniques such as cleaning book spines, flattening leaves and cutting boards. Instructions for cutting endsheets and spine inlays are oriented toward batch production, since these supplies are prepared in quantity to have on hand while working.

Book Structures and Basic Working Methods

(Publishers' Case Binding Sketch) - Ohio University

Commercial Sewing Structures - Cincinnati

Working Tips - Cincinnati

Cutting Board by Hand - Cincinnati

Flattening Text Leaves - Berkeley

Trimming Endpapers - Ohio State

Cutting Endsheets - Emory

Cutting Endsheets - Berkeley

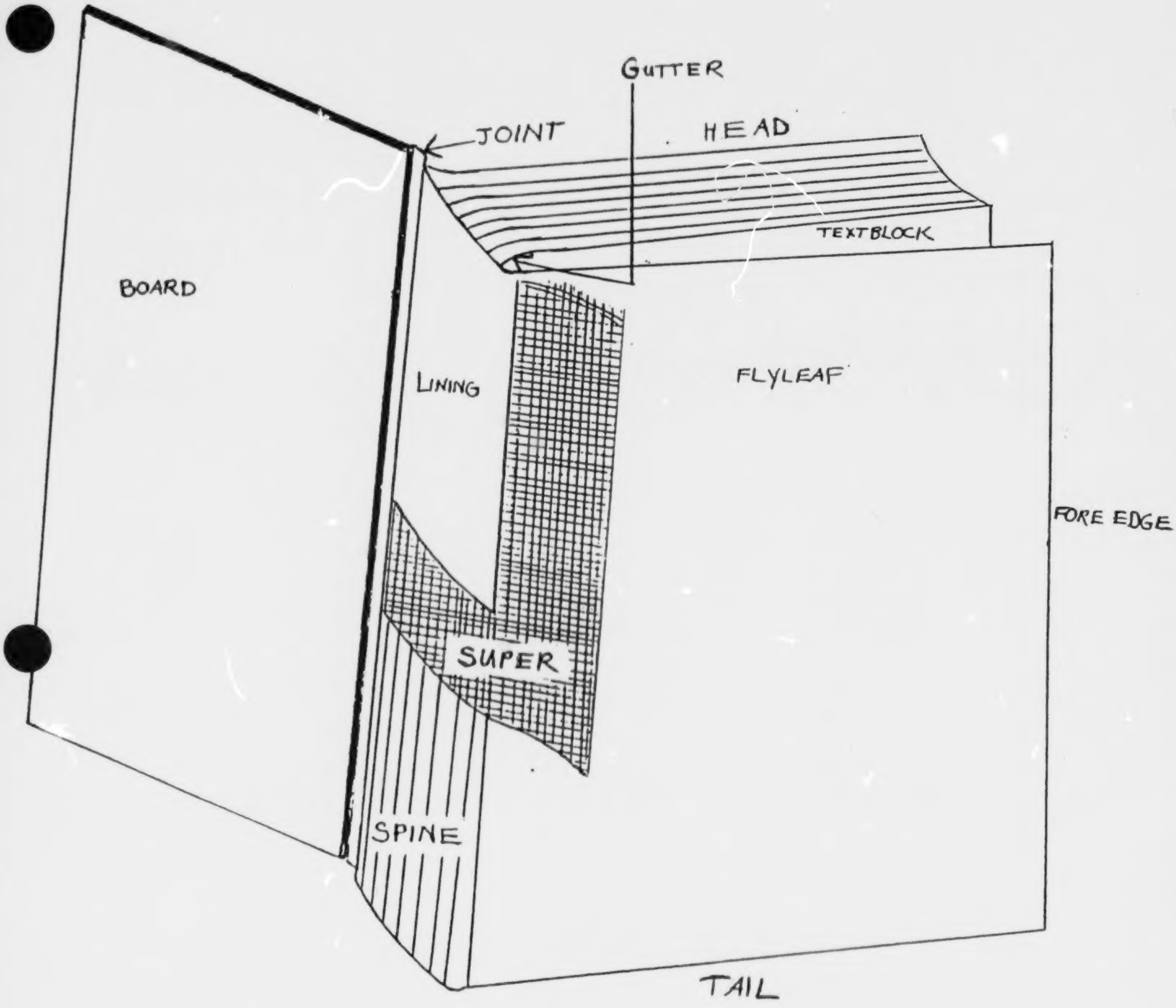
Pre-cut Super - Berkeley

Cutting Spine Inlays - Emory

Cleaning the Spine - Cincinnati

Repair Standards for Repaired Materials - Ohio University

Ohio Univ


GUTTER
JOINT
HEAD
TEXTBLOCK
BOARD
LINING
FLYLEAF
FORE EDGE
SUPER
SPINE
TAIL

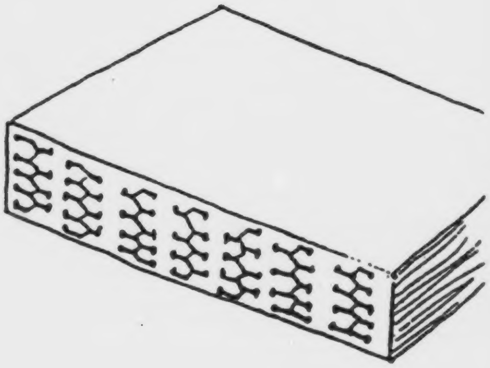
Cincinnati's

COMMERCIAL SEWING STRUCTURES

1. OVERSEWING-Original spine folds and sewing chopped off to form loose sheets.

Advantages:
- Strength (this can also be a disadvantage)

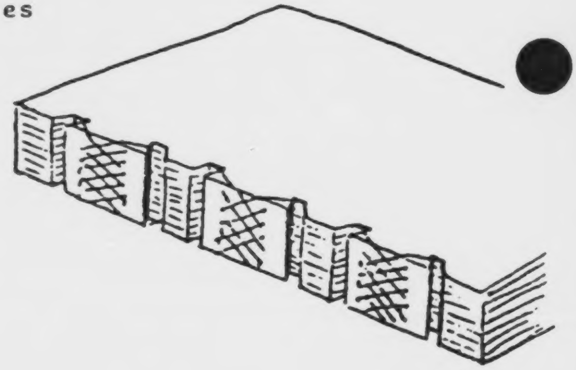
Disadvantages:
- Will not open easily or lie flat.
- Signature folds are cut off.
- Loss of inner margin.
- Can be damaged when forced for photocopying.
- Brittle papers break along sewing.
- Process is irreversible.



2. CLEAT SEWING-Spine chopped off and trenches cut to receive sewing.

Advantages:
- Cheaper and faster than oversewing
- Requires slightly less margin than oversewing.

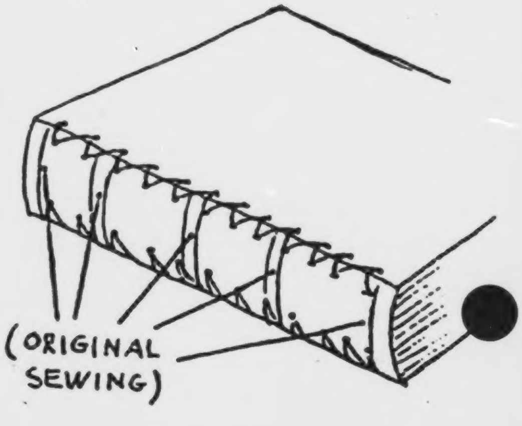
Disadvantages:
- Same as oversewing.



3. RECASING - Original sewing left intact with new endsheets overcast to first and last few signatures.

Advantages:
- Process is reversible.
- Can be used for some brittle materials- as long as original sewing is strong.

Disadvantages:
- More expensive than other processes.



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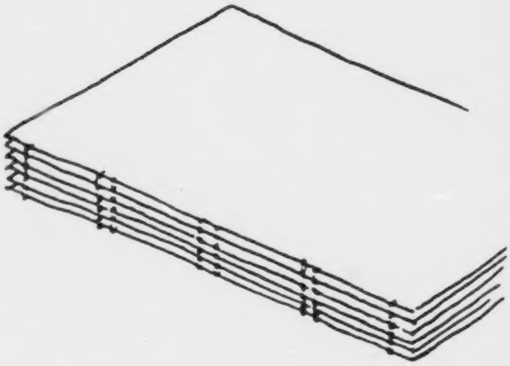
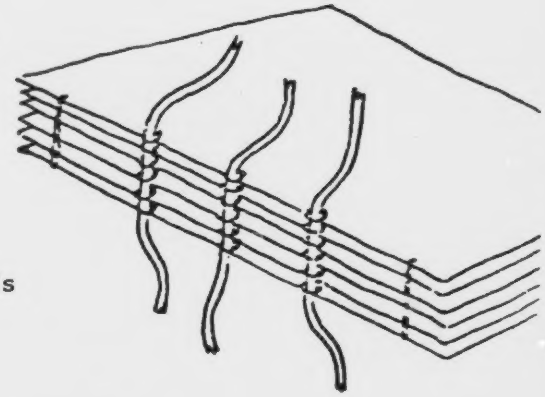
4. THROUGH-THE-FOLD SEWING-Signatures sewn through the original folds and link-stiched together.



Advantages:
- Book opens easily and lies flat.
- Sewing is strong, flexible and long-lasting.
- Process is reversible.
- No loss of margin.

Disadvantates:
- Expensive
- Machine through-the-fold sewing is not always possible with heavy paper or thick signatures.

5. SUPPORTED THROUGH-THE-FOLD SEWING-Sewing supported on recessed cords.



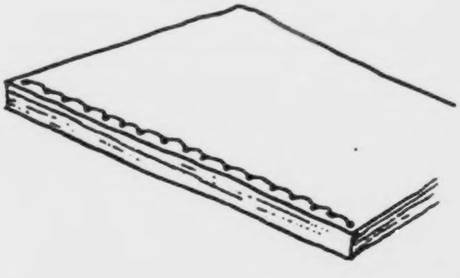
Advantages:
- Same as unsupported.

Disadvantages:
- Expensive
- Kerf marks must be cut across spine folds to accept recessed cords.

6. SINGER STAB SEWING-Loose sheets or signatures pierced through near spine edge and sewn on industrial Singer sewing machine.

Advantages:
- Great strength.

Disadvantages:
- Same as oversewing



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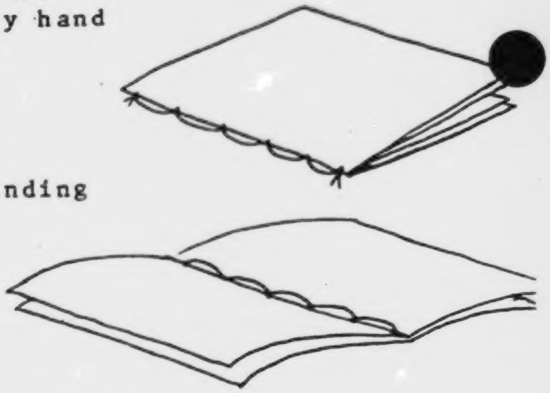
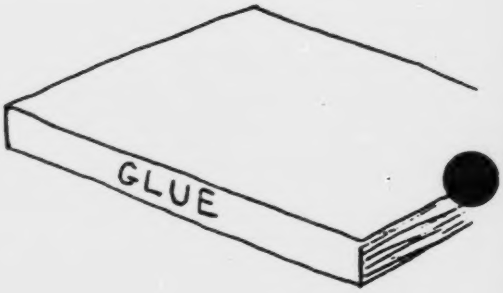
7. **HAND SEW PAMPHLET-** Single signature pamphlets sewn through the fold by hand or machine.



Advantages:
- Inexpensive.
- Strong and flexible
- Less destructive than staples or post binding

Disadvantages:
- None

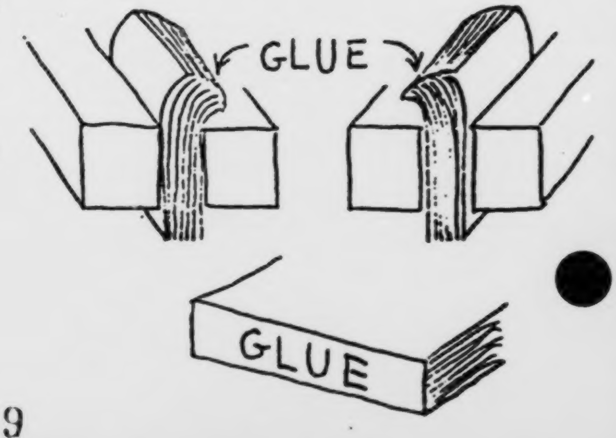
8. **ADHESIVE BINDING-** Also known as "Perfect Binding", text block, in the form of loose sheets, is glued along spine.



Advantages:
- Inexpensive.
- Relatively flexible with little loss of margin.
- Acceptible for brittle materials.

Disadvantages:
- Spine folds chopped off to produce loose sheets.
- Not acceptable for heavy or thick volumes.
- Adhesives may not age well.
- Pages are not well secured.

9. **DOUBLE FAN ADHESIVE BINDING-**Loose sheets glued along spine with adhesive introduced slightly between pages.



Advantages:
- Same ss adhesive binding.
- Pages secured three times as well as regular adhesive binding.

Disadvantages:
- Same as adhesive binding.

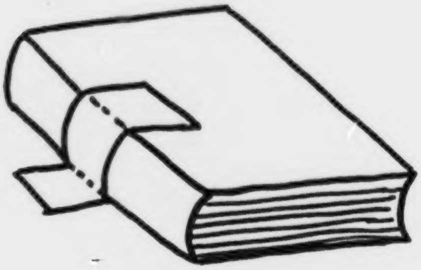
Working Tips

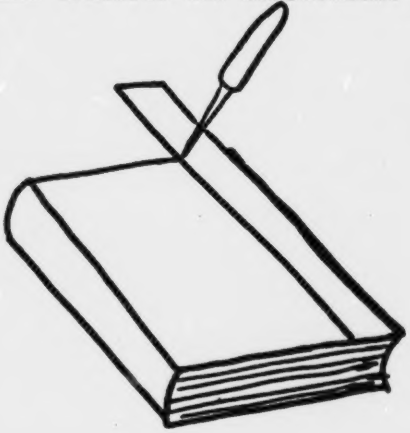
Measuring

Here are several ways to determine the distance between two points.

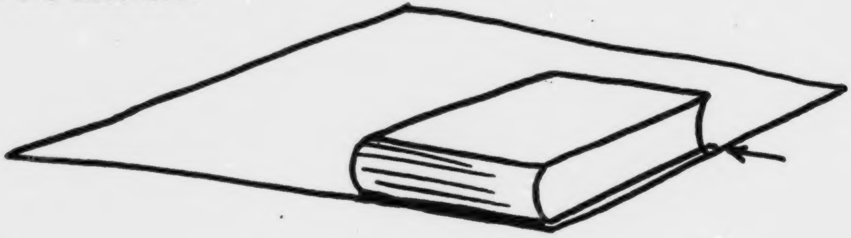
Measure with a ruler. This works fine if the surface is flat. If you are measuring a curved surface, i.e. the spine of a book, the ruler will slip and the measurement will be incorrect.

Mark the measurement on a strip of paper and transfer the measurement to the material.

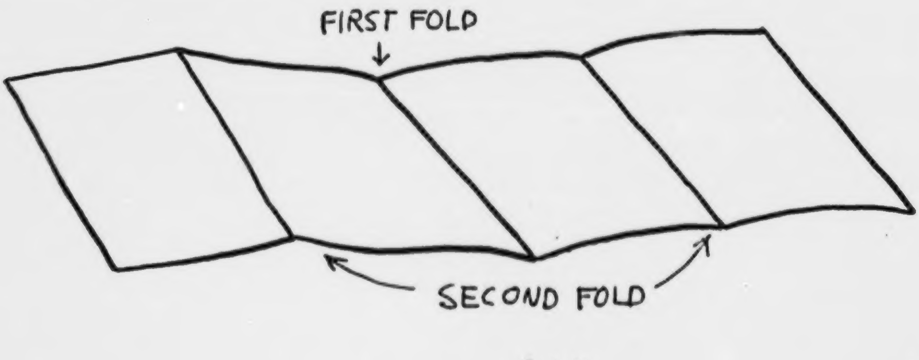




Place the item to be measured on the material to be used and mark the measurement on the material.



Measure equal distances with folds. Equal distances can be measured with a series of folds. Bring one edge of the material over to meet the opposite edge and fold. To divide into fourths, fold in half again. Folding can be continuous until the desired distances are reached.



Use your eye. There are times when it is not necessary to be "exact." Train your eye to approximate 1", ½" and ¼" distances. With practice you will become quite accurate. Trust your eye, it gets better with use.

Cutting

Our large floor model board shears is equipped with a large bed, a foot operated pressure bar, and a 40" cutting blade. Use this cutter when making long cuts. Two smaller Kutrimmers with 24" blade are conveniently placed on bench surfaces and are used for making small cuts.

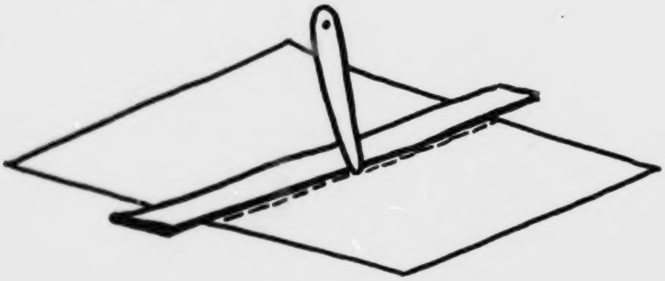
BEWARE! The blades of all cutters are very sharp. Keep fingers away from the cutting edge.

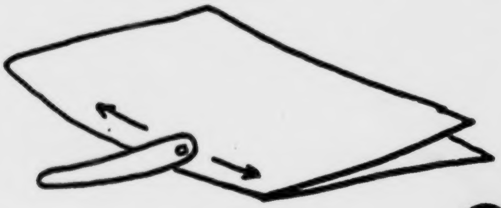
Trimming endpapers and other precision cutting is usually done with a scalpel. Put a self-healing green mat under the material to be cut to insure the blade staying sharp longer and the cut being cleaner. The rule of thumb is to make several light cuts rather than one heavy cut that can damage the material.

Scoring and Folding

To score, place a straight edge at the designated place and draw the point of a bone folder firmly along the edge two or three times. The surface will be indented.

When folding, bend material over, press down and flatten. When folding a large area, align edges, press down in the center of the fold with your thumb and bone the crease from the middle outwards in one direction and then in the other.





Pasting

When applying adhesive to a surface, the following points are helpful:

1. The size of the surface determines the size of the brush used. Small brushes for small areas, large brushes for large areas.
2. Do not use a natural bristle brush for PVA. It takes a long time to wash PVA out of a natural bristle brush and often there is a residue of PVA that hangs on to the bristles.
3. Always put waste paper under the surface being pasted. Throw the waste paper away after it has been used. Residual adhesive can stick to other surfaces.
4. Paste from the center out toward the edge so that adhesive is carried onto the waste paper and not under the material.
5. A thin even coat of adhesive makes the best bond. Too much adhesive will ooze out at the edges and stain other surfaces.
6. If you put your brush in water when not pasting, be sure to remove all liquid from the brush before reusing it. It is only necessary to cover the bristles of the brush with water.

Rubbing Down and Pressing

When two surfaces are adhered together, rub them down with a bone folder through clean waste paper. Move the waste paper several times over the surface so that excessive moisture is picked up, and any wrinkles or air bubbles are pressed out.

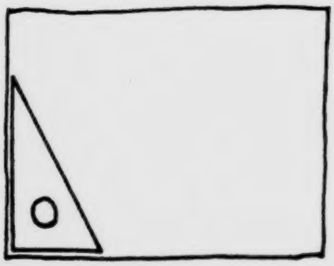
When pressure is needed to set a repair, i.e. the groove of a binding, place the book between two pressing boards that have brass edges and put the "sandwich" in the center of the nipping press. Turn the wheel on top of the press clockwise bringing the platten down until pressure is exerted on the book. "Nip" the book for only a few minutes, remove and place it under a lead weight or wrapped brick overnight to dry.

CUTTING BOARD BY HAND

If you do not have a board or paper cutter you can cut cardboard using a utility knife and a metal straight-edge.

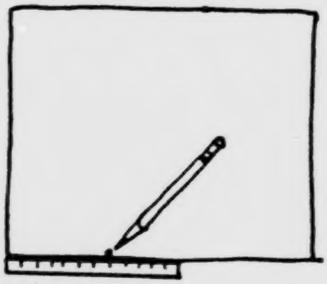
To measure:

First of all, using your plastic triangle, make sure you have a true 90° angle on at least one corner of the board you are about to cut. Make all measurements working from this corner.



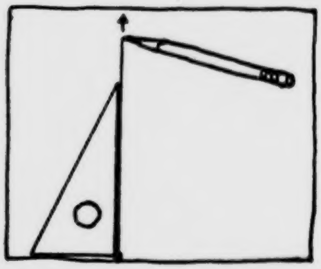
1.

Find true 90° corner.



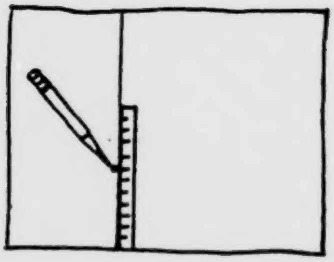
2.

Measure desired length with ruler and mark that point along edge.



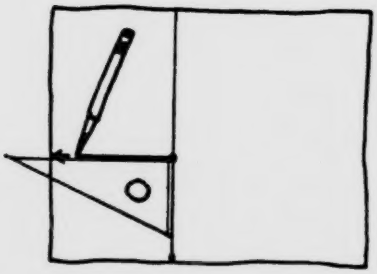
3.

Using triangle as a guide, draw cutting line.



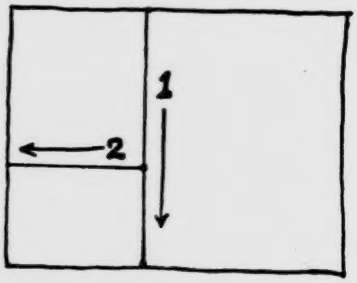
4.

Use ruler to mark next measurement.



5.

Use triangle to draw second cutting line.



6.

Make cuts in this order.

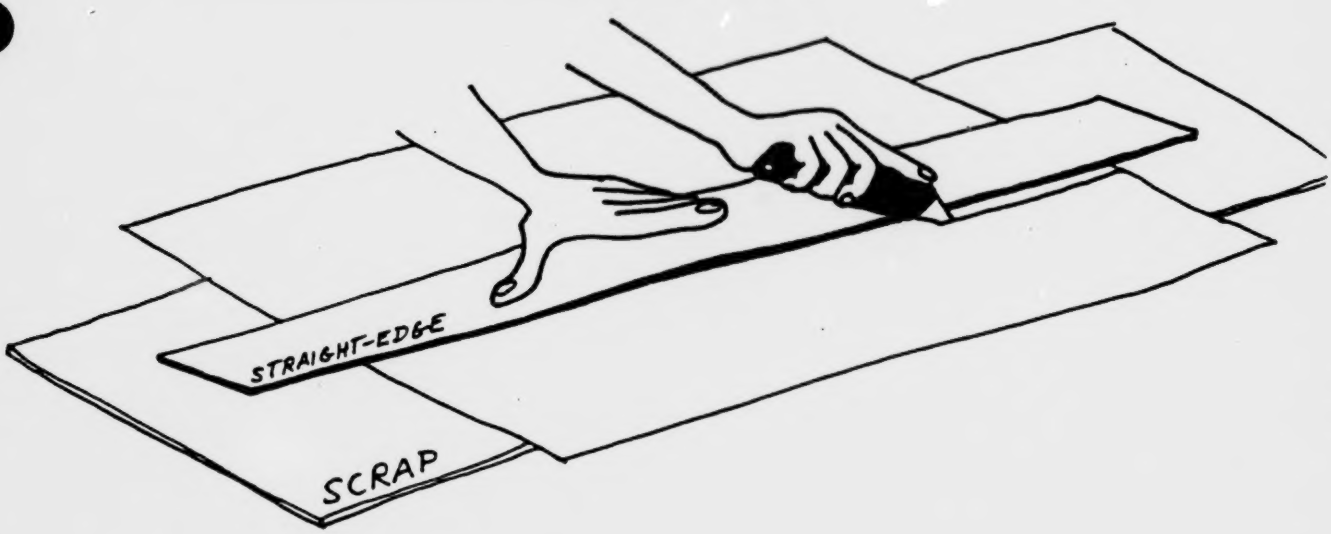
To cut:

1. Work on a surface that allows you to bend at the waist so that the weight of your upper body can be put into the work.

2. Always place scrap board under the work to protect the table top from being cut.

3. Hold metal ruler (with non- slip cork surface) firmly in place along cutting line.

4. Run the blade of the knife all along the lenghth of the cutting line, holding it firmly against the metal straight-edge. Several light strokes are easier and cleaner than one heavy stroke.



Helpful Hints:

- When making an enclosure or book cover you can take measurements directly off the book instead of using a ruler.
- Remember that the grain of the board must run head-to-tail (vertically) for book covers, and with-the-fold for enclosures.

FLATTENING TEXT LEAVES

1. Place thin stiff board, covered with Reemay and blotter, under leaf to be flattened,

2. Wipe creased areas of leaf with damp (nearly dry) Handiwipe.

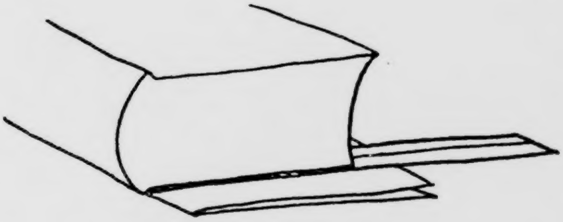
3. Dry leaf with tacking iron over silicone release. Press creases; do not rub leaf with iron as this may make the leaf curl.

4. Weight or press to dry if needed.

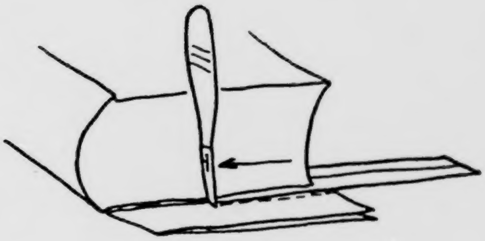
Ohio State

TRIMMING ENDPAPERS *

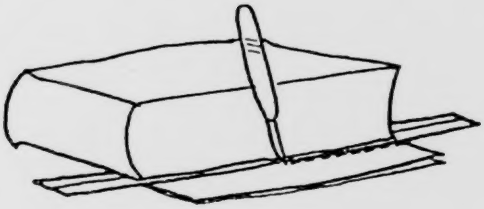
1. Place the bookblock on a green self-healing cutting surface. Insert a metal ruler between the bottom endpapers and the text. Line up the edge of the ruler along the body of the text.



2. Hold the text firmly in place. With a sharp scalpel cut through along the edge of the ruler.
Use several LIGHT STROKES.



3. Trim the head and tail of the endpapers first then the fore edge.



* Before trimming the endpapers they must be affixed to the "V" hinge and the spine must be lined.

CUTTING ENDSHEETS

Materials:

guillotine
bone folder
ruler
text paper of various weights and tones
(70 and 80 lb.; white, soft white, ivory)
scrap strips of 2 ply board

Procedure:

1. Determine sizes needed in each color and weight. Standard sizes (height by width in inches):

9 x 6
10 x 7*
11 x 8*
12 x 9
13 x 10
14 x 11

* denotes most common sizes used

2. Pull a small stack of full size sheets of the desired paper. Note grain direction. Fold each sheet in half, folding parallel to the grain. Enhance the crease with the bone folder. Fold as many sheets as are necessary to ensure desired amount of finished endsheets. Guillotine works best when cutting between 20 - 30 folded sheets of paper (40 - 60 actual leaves).

3. Be sure guillotine blade is sharp and has no nicks. If necessary, change the blade before cutting endsheets (see Supervisor).

4. Place folded strips of paper in guillotine with folded edge against left side of guillotine bed. Place scraps of thin board (the width of cutting bed) underneath and on top of the stack of paper. Do not use creased board as any surface uneveness will transfer to the endsheets. Tighten the clamp wheel just enough to hold the paper in place; tightening too much will cause the stack of paper to crease or cockle. Cut to desired height.

5. Trim to desired width, placing folded edges against backboard of guillotine.

Note: If creasing or cockling occurs, first loosen clamp wheel slightly. Problem might also be remedied by using a larger stack of paper. When cutting smaller stacks of paper, the clamp wheel must be tighter than when cutting larger stacks of paper.

Cutting Endsheets - Instructions

Double folio endsheets are cut from Mohawk Superfine Text paper, 25" x 38" long.

Three standard sizes of endsheet are used, which are cut grain long, but to minimize waste. Sizes are:

A. 19" X 12.5"

B. 12" X 10"

C. 9.5" X 6.25"

A. 19" X 12.5" large endsheets

1. Take 40 sheets (about 1/4" of paper). Cut in half, 19" grain long. Stack into one pile.
2. Fold two sheets at a time into double folios. Sharpen crease with bone folder. Jog sheets against board shear or other accurate right angle to make folds perfectly square.

B. 12" X 10" medium endsheets

1. Cut a stack of 20 sheets into three 12" lengths, grain long. (Save excess 2" strip.)
2. Stack sheets into one pile. Cut to 20" width. (Save excess 5" strip for note cards.)
3. Fold two sheets at a time into double folios. Sharpen crease with bone folder. Jog sheets against board shear or other accurate right angle to make folds perfectly square.

C. 9.5" X 6.25" small endsheets

1. Cut a stack of 20 sheets into four 9.5" lengths, grain long.
2. Stack into one pile.
3. Fold each sheet in half, then in half again. Sharpen crease with bone folder. Jog sheets against board shear or other accurate right angle to make folds perfectly square.

UC Berkeley
Conservation Department

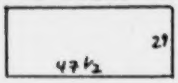
1/88

Berkeley

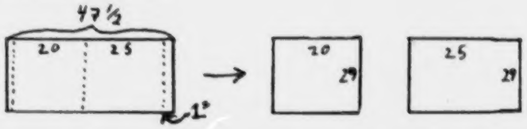
PRE-CUT SUPER: 14"X2 1/2-6" (8 sizes)

1) using roll of super with width: 47 1/2"

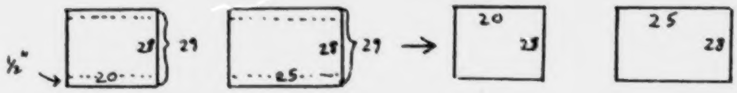
2) roll out super to 29"height. make 12 folds of this using template. (keep edges even!)



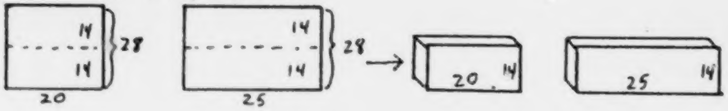
3) cut selvage edges so width is 20"X 29" & 25"X 29":


47½
20
25
1"
20
29
25
29

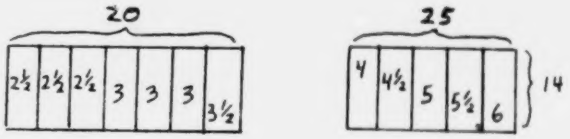
4) cut folds so height is 20"X 28" & 25"X 28":


½"
28
29
20
28
29
25
20
28
25
28

5) then half the height to 20"X 14" & 25"X 14", stack.


14
14
28
20
14
14
28
25
20
14
25
14

6) cut strips as indicated:


20
2½
2½
2½
3
3
3
3½
25
4
4½
5
5½
6
14

CUTTING SPINE INLAYS

Materials:

guillotine and/or board shear	pencil
light weight Bristol board	ruler

Procedure:

1. Determine strips needed from the following sizes (indicated in inches):

   1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1 1/8, 1 1/4, 1 3/8, 1 1/2, 1 5/8,

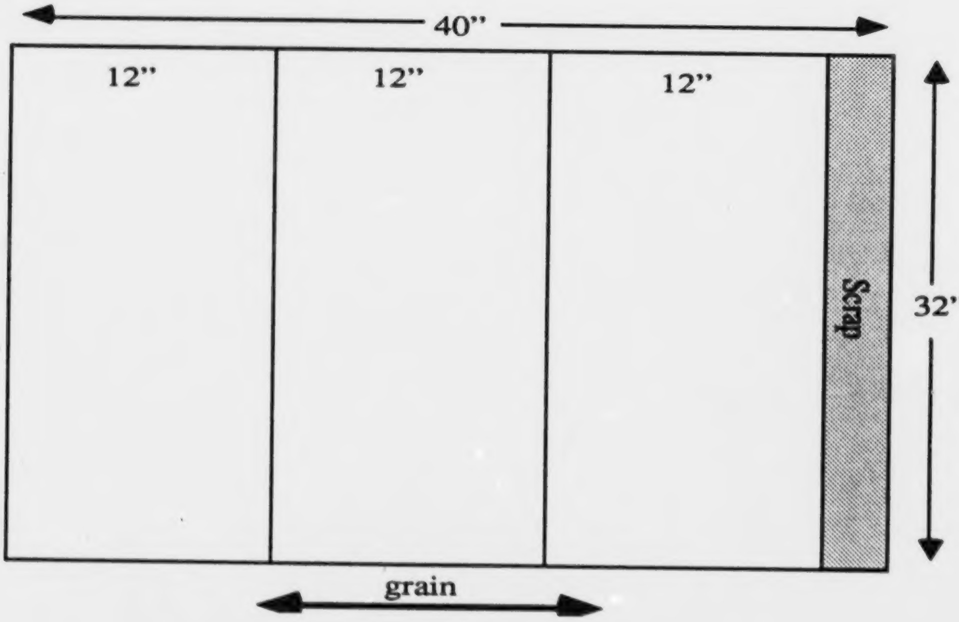
   1 3/4, 1 7/8, 2, 2 1/8, 2 1/4, 2 3/8, 2 1/2, 2 5/8, 2 7/8, 3

   The most common sizes used are between 7/8" and 1 5/8".

2. Pull a small stack of full size sheets of board. Note grain direction. Spine inlays must have grain running the length of the strips.

3. Mark (or set board shear) and cut strips of board to 12" height.

4. Set the right guide of the board shear to the desired strip width and lock into place. Feed the 12" high strips under the blade from the left to butt against the guide ensuring straight cuts of the thinner strips.



Cincinnati

Cleaning the Spine

1. With the book held in a lying press, remove any loose lining material which can easily be pulled or scraped off.

2. To remove all remaining materials such as paper, cloth and old glue, apply a heavy coat of thick paste to the spine to soften the lining and old glue. After a few minutes carefully scrape away paste with softened materials. If certain areas are not removed, apply paste again to those areas only, and after a few minutes scrape again.

   Caution: Use thick paste. Very thin paste will allow too much moisture to penetrate the signature folds leaving stains inside the book.

   Scrape carefully. Too much, or too vigorous scraping can damage the signature folds.

3. Allow spine to dry before proceeding with any other steps.

Ohio Univ

REPAIR STANDARDS FOR REPAIRED MATERIAL

PAMPHLETS Pamphlets shall be sewn with tight and even tension, the thread should snap against the paper. Tyvek shall be trimmed even with the double-stitch flaps. Bookcloth shall be centered over the spine of the binder and shall cover the length of the spine. Binders shall be trimmed so that they have 1/4" margins at head, tail and fore edge.

TIP-INS Tip-ins shall have no more than 1/8th inch tip and shall not obscure any text or illustration. Blank pages shall be tipped-in between the pastedown and the flyleaf.

COVER REINFORCEMENT Boards reinforcing thin flexible covers shall have the grain aligned with the spine of the book. Any text printed on the inside of the covers shall be photocopied, and the photocopies adhered to the inside of the reinforcing boards. Excess folder stock shall be trimmed flush with the original cover. Reinforcing boards shall be placed 1/4 inch from the spine edge.

PAPER REPAIR All page tears shall be repaired with Document Repair Tape or Japanese tissue and paste. Document Repair Tape shall not be adhered with pva.

COVER REATTACHMENT Paper covers shall be readhered to the spines of their respective books. Case bound books shall have only the detached supers readhered to the spines.

INTERNAL HINGES The pastedowns shall be lifted neatly, without tears and holes. Boards shall be seated correctly into the joint so the spine of the case conforms correctly to the spine of the textblock. Cloth hinges shall be smoothly adhered to the boards. The lifted area of the pastedown shall be readhered smoothly without excess adhesive.

AESTHETIC HINGES Paper hinges applied to conceal torn pastedowns or problem internal hinges, shall extend only to the shoulder of the textblock and only 1/2 inch onto the board. The paper shall be applied smoothly, free from wrinkles and all hinges shall be cut even with the pastedown/textblock.

Ohio Univ

SPINE REPAIR The turn-in areas of the pastedowns shall be lifted neatly, without tears and holes. The covering material shall be lifted neatly without tearing or stretching it and shall be evenly trimmed 1/16th inch from the joint edge of the boards. The new cloth shall be centered over the spine. The turn-ins shall be tightly adhered around the edges of the boards. The lifted cloth shall be readhered smoothly without stretching or signs of excess adhesive. The original spine shall be trimmed so it is a total 1/8th inch narrower and a total 1/8th inch shorter than the new spine and shall be reafixed to the newly constructed spine with a small amount of adhesive.

Leave all pockets intact in the books. Removing the pockets slows down work and damages the pastedowns of the books.

All bar codes shall be retained and reafixed to the repaired book, pamphlet binder or whatever.

3

Treatment Decision Making

Treatment decisions must be guided by institutional policies regarding retention in original format, replacement, and limits to per-volume expenditure for treatment. The choice of what to treat and how to treat depends upon a range of factors such as physical condition, research significance, patterns of use and available treatment options, including in-house repair, library binding and reformatting. Criteria for identifying items with artifactual value should also be incorporated into the decision-making process when applicable, since such material will usually be treated differently than general collection materials.

The following are some examples of standard treatment decision paths for different institutions. The process can be expressed in policy statements, decision trees or in charts that relate treatment options to categories of material and types of damage. The sections of this manual describing specific treatments also include brief descriptions of the rationales for choosing those treatments.

Treatment Decision Making

Preservation Decision Making - Wellesley (MA) Free Library

Typical Repair Procedures for a Public Library

Damaged Materials Treatment Option Form - San Francisco Public Library

Preservation Workflow - Harvard

Decision Trees - Berkeley

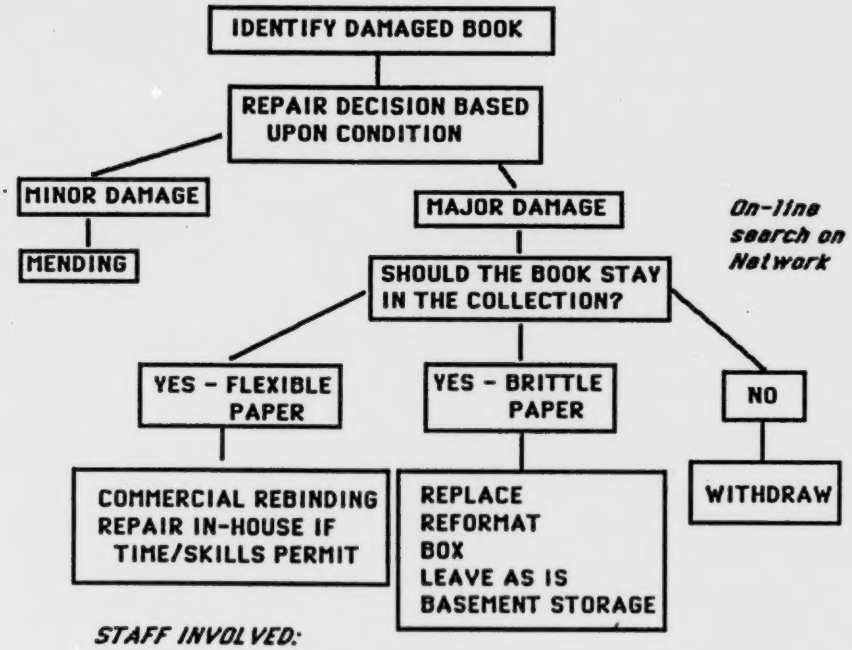
Conservation Treatment: Types of Binding and Enclosures - Cornell

Binding and Repair Procedures - MIT

Books for Preservation Treatment - Columbia

PRESERVATION DECISION-MAKING

EVALUATING DAMAGED BOOKS IN A MEDIUM-SIZED PUBLIC LIBRARY


IDENTIFY DAMAGED BOOK
REPAIR DECISION BASED UPON CONDITION
MINOR DAMAGE
MENDING
MAJOR DAMAGE
On-line search on Network
SHOULD THE BOOK STAY IN THE COLLECTION?
YES - FLEXIBLE PAPER
YES - BRITTLE PAPER
NO
COMMERCIAL REBINDING
REPAIR IN-HOUSE IF TIME/SKILLS PERMIT
REPLACE
REFORMAT
BOX
LEAVE AS IS
BASEMENT STORAGE
WITHDRAW

STAFF INVOLVED:

Circulation - Identify damaged books upon return
Reference - Identify damaged books on shelves
Stack Review - Identify damaged books while weeding

Repair Staff - Repair decision; mending
Tech Services - Commercial binding; on-line search

Subject Specialists (Selectors) - Collections decisions for books with major damage

Wellesley Free Library
Wellesley, MA, 1991

TYPICAL REPAIR PROCEDURES FOR A PUBLIC LIBRARY TREATING CIRCULATING COLLECTIONS

(These are not intended as a recommendation for research libraries)

REPAIR	PROCEDURES	MATERIALS

DUST JACKETS

Soiled plastic covers over dust jackets	Surface clean	Fantastik, paper towels
Torn paper dust jackets	Repair jackets	Magic Mending Tape
Torn plastic covers over paper dust jackets	Replace jackets	New plastic covers, mend paper jackets with tape as needed

PAPER REPAIR

Soiled pages	Surface clean	Magic Rub erasers
Torn pages - Children's books "popular" books of limited life	Repair tears	Archival Aids or Filmoplast mending tape, Filmoplast P90 tape for heavy paper "Magic Mending Tape" for popular paperbacks
Torn pages - Reference, music art, non-fiction and literature of greater value	Repair tears	Archival Aids Tape Filmoplast P tape, heat-set tissue

RE-ATTACH PAGES

Loose single pages	Tip-in	PVA mix, wax paper
Loose signatures	Tip-in	PVA mix, wax paper, needle and thread
Broken adhesive binding	Reglue, fanning pages	PVA mix, Klamp-It press
Sewing broken	Send to selector for review	Send to commercial binder if paper is not brittle Discard, replace, or place in basement storage if brittle

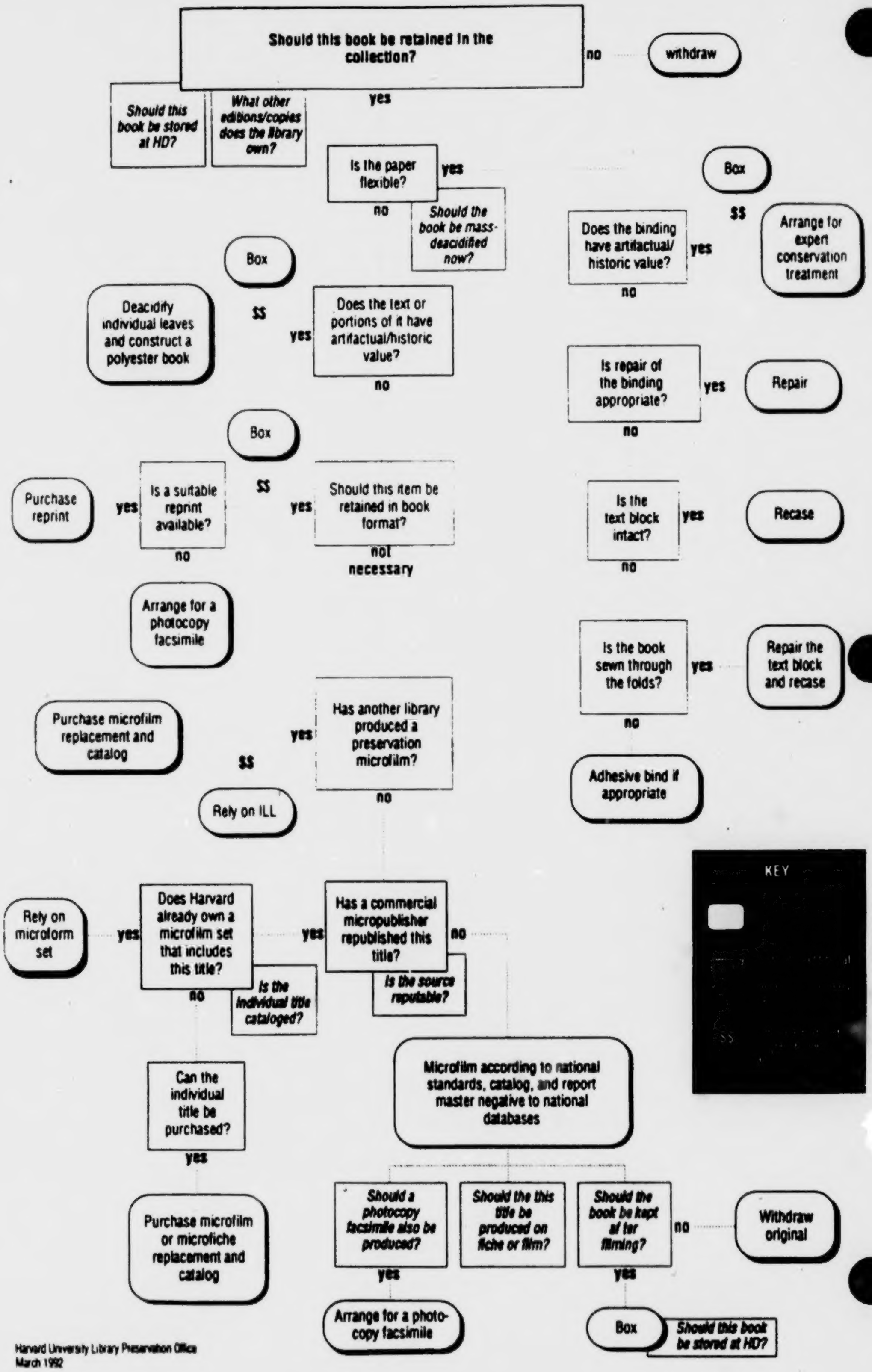
BINDING REPAIR

Loose hinges	Tighten hinges	Knitting needle, PVA mix, press, wax paper
Worn/detached spine, endpaper intact	Reback	Binding cloth, paper for spine lining
Broken joints, super intact, endpapers in good condition	Reback, reinforce hinges	Binding cloth, paper for spine lining, paper tape
Broken joints and hinges, super intact, endpapers in poor condition	Reback, replace endpapers	Binding cloth, spine linining, endpapers
Broken hinges (super split) case in good condition or boards in good condition	Recase with cambric hinge and original boards for adhesive bindings Recase with new endpapers and original case or boards tipped on if adhesive binding sewn on if signatures	Binding cloth, super, spine lining, hinge cloth Binding cloth, super, spine lining, endpaper
Broken hinges, super split, boards in poor condition	Send to commercial binder if paper is in good condition after review by a selector Recase/new endpapers and boards tipped on if adhesive binding sewn on for signatures	 Binding cloth, super, spine lining, endpapers

N. Schrock, 12/91

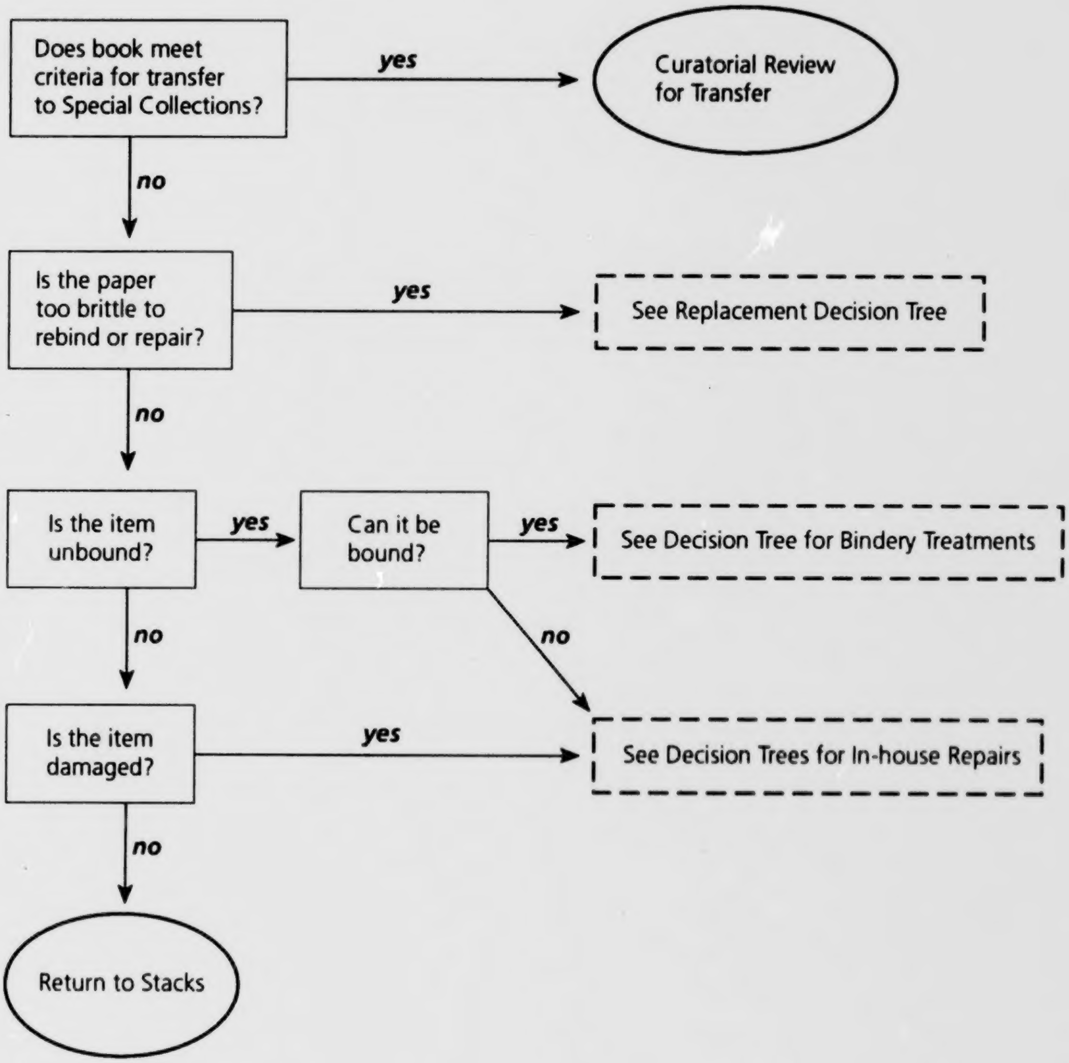
Preservation Workflow

for a worn, damaged, or deteriorated book in the research collections

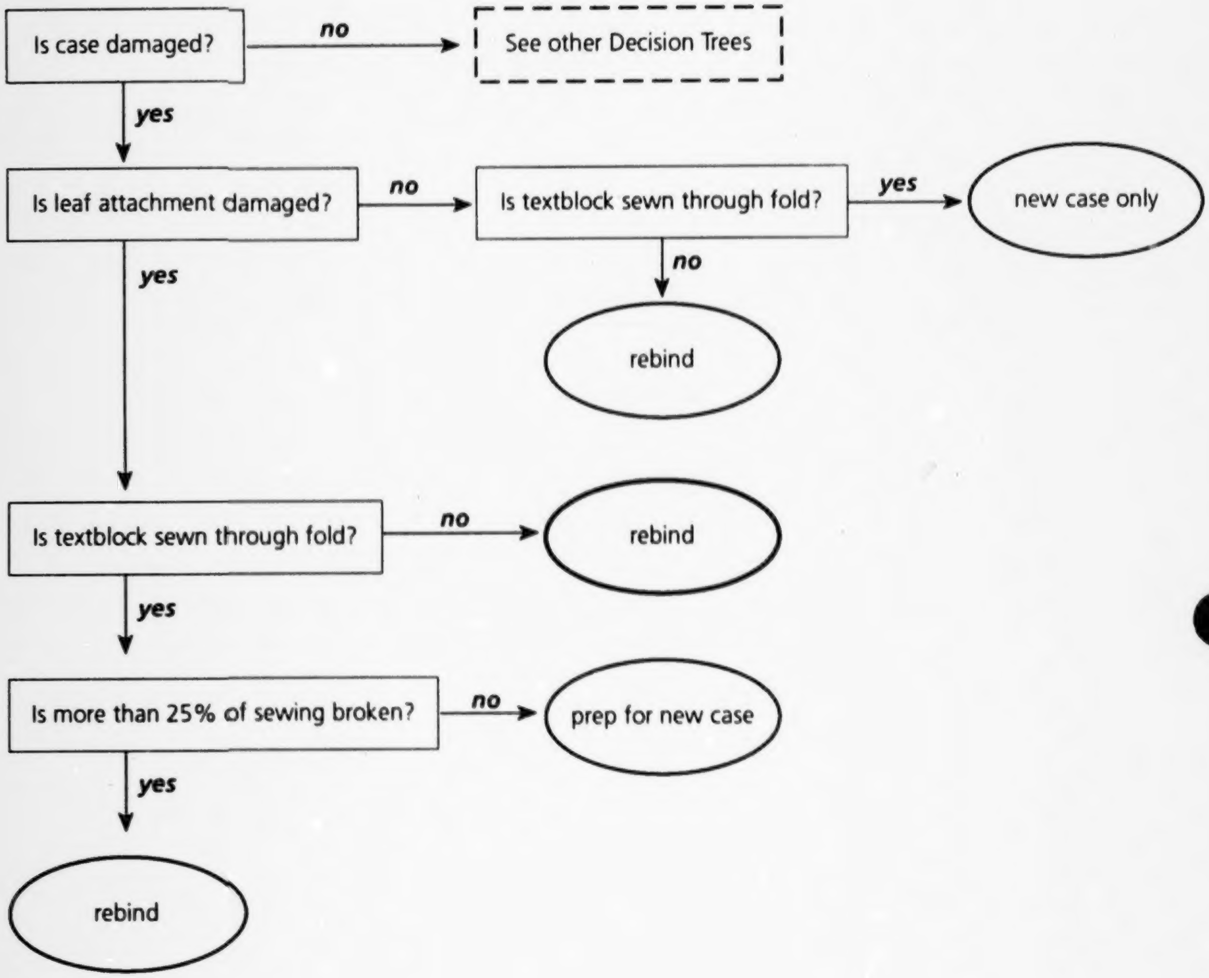

Should this book be retained in the collection?
no
withdraw
Should this book be stored at HD?
What other editions/copies does the library own?
yes
Is the paper flexible?
yes
Box
$$
Should the book be mass-deacidified now?
no
Does the binding have artifactual/historic value?
yes
Arrange for expert conservation treatment
no
Box
Deacidify individual leaves and construct a polyester book
$$
yes
Does the text or portions of it have artifactual/historic value?
no
Is repair of the binding appropriate?
yes
Repair
no
Box
$$
Purchase reprint
yes
Is a suitable reprint available?
no
yes
Should this item be retained in book format?
not necessary
Is the text block intact?
yes
Recase
no
Arrange for a photocopy facsimile
Is the book sewn through the folds?
yes
Repair the text block and recase
no
Adhesive bind if appropriate
Purchase microfilm replacement and catalog
yes
Has another library produced a preservation microfilm?
$$
Rely on ILL
no
Rely on microform set
yes
Does Harvard already own a microfilm set that includes this title?
yes
Has a commercial micropublisher republished this title?
no
Is the individual title cataloged?
Is the source reputable?
no
KEY
$$
Can the individual title be purchased?
yes
Microfilm according to national standards, catalog, and report master negative to national databases
Purchase microfilm or microfiche replacement and catalog
Should a photocopy facsimile also be produced?
Should the this title be produced on fiche or film?
Should the book be kept after filming?
no
Withdraw original
yes
yes
Arrange for a photocopy facsimile
Box
Should this book be stored at HD?

Harvard University Library Preservation Office
March 1992

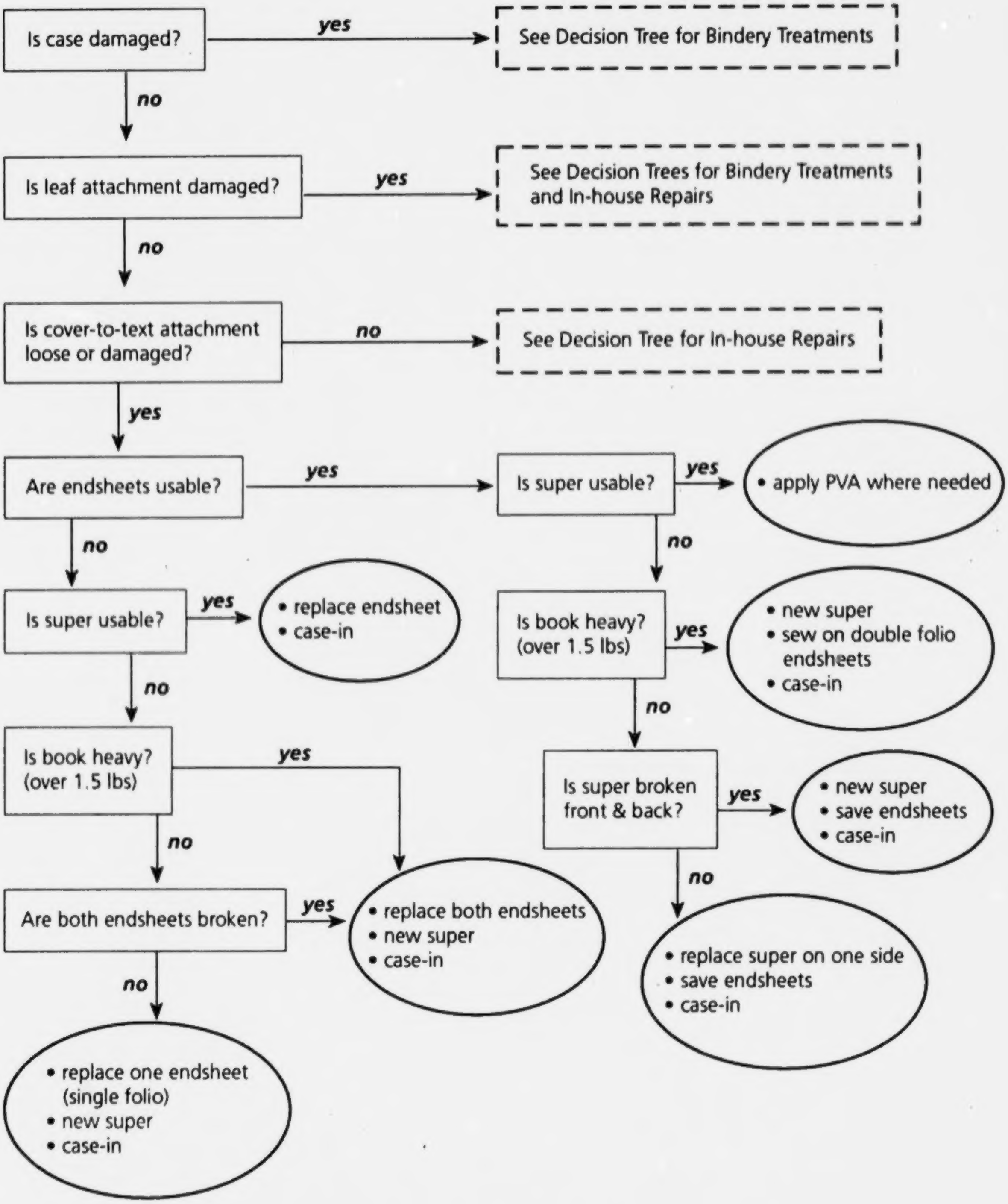
Overview of Sorting Decision Trees


Does book meet criteria for transfer to Special Collections?
yes
Curatorial Review for Transfer
no
Is the paper too brittle to rebind or repair?
yes
See Replacement Decision Tree
no
Is the item unbound?
yes
Can it be bound?
yes
See Decision Tree for Bindery Treatments
no
no
Is the item damaged?
yes
See Decision Trees for In-house Repairs
no
Return to Stacks

Treatment Decision Tree
Bindery Treatments


Is case damaged?
no
See other Decision Trees
yes
Is leaf attachment damaged?
no
Is textblock sewn through fold?
yes
new case only
no
rebind
yes
Is textblock sewn through fold?
no
rebind
yes
Is more than 25% of sewing broken?
no
prep for new case
yes
rebind

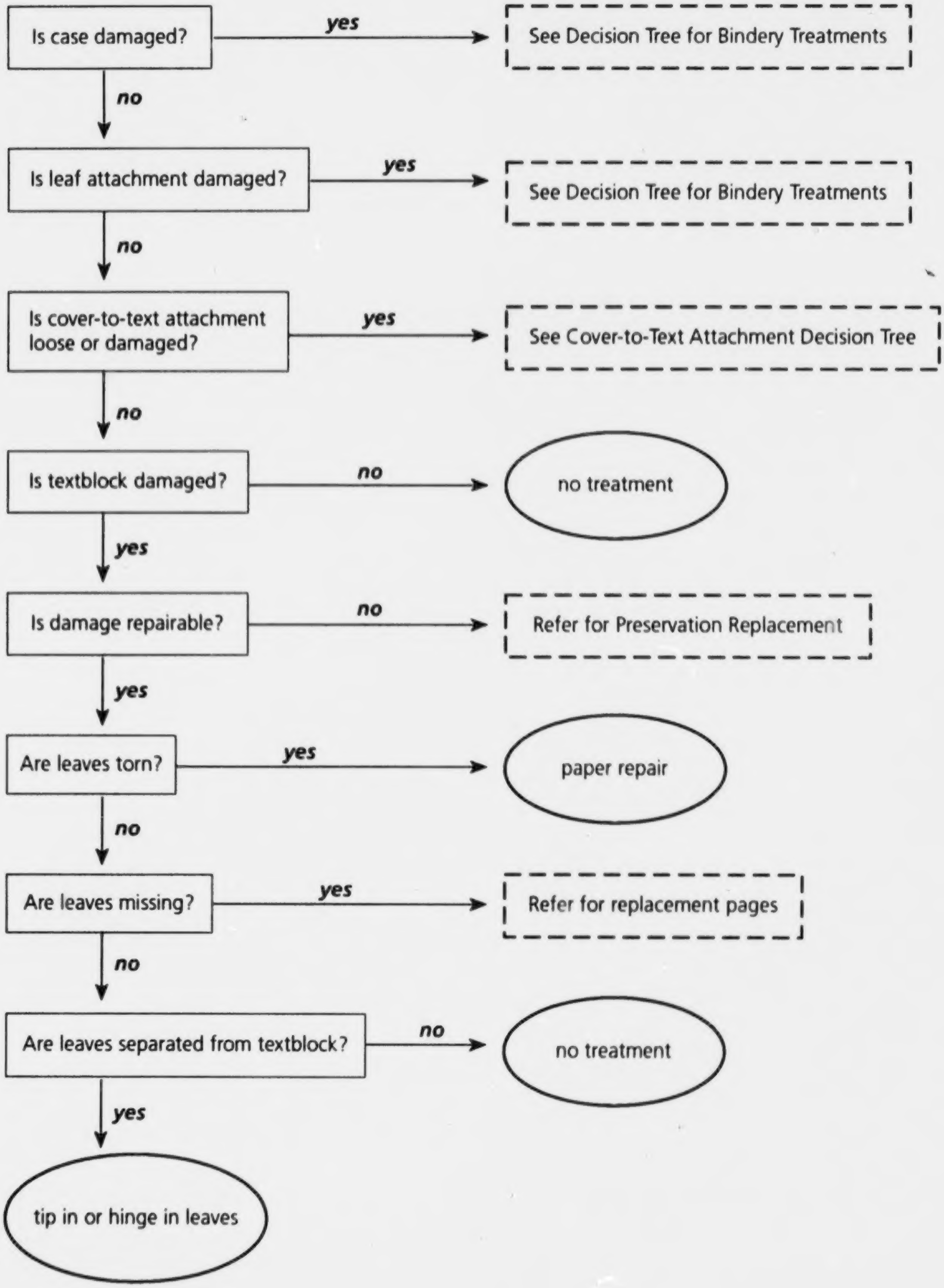
Treatment Decision Tree
Cover-to-Text Attachment Problems


Is case damaged?
yes
See Decision Tree for Bindery Treatments
no
Is leaf attachment damaged?
yes
See Decision Trees for Bindery Treatments and In-house Repairs
no
Is cover-to-text attachment loose or damaged?
no
See Decision Tree for In-house Repairs
yes
Are endsheets usable?
yes
Is super usable?
yes
• apply PVA where needed
no
Is book heavy? (over 1.5 lbs)
yes
• new super
• sew on double folio endsheets
• case-in
no
Is super broken front & back?
yes
• new super
• save endsheets
• case-in
no
• replace super on one side
• save endsheets
• case-in
no
Is super usable?
yes
• replace endsheet
• case-in
no
Is book heavy? (over 1.5 lbs)
yes
no
Are both endsheets broken?
yes
• replace both endsheets
• new super
• case-in
no
• replace one endsheet (single folio)
• new super
• case-in

UC Berkeley 9/91

132

Treatment Decision Tree
Textblock Damage (In-House Repairs)


Is case damaged?
yes
See Decision Tree for Bindery Treatments
no
Is leaf attachment damaged?
yes
See Decision Tree for Bindery Treatments
no
Is cover-to-text attachment loose or damaged?
yes
See Cover-to-Text Attachment Decision Tree
no
Is textblock damaged?
no
no treatment
yes
Is damage repairable?
no
Refer for Preservation Replacement
yes
Are leaves torn?
yes
paper repair
no
Are leaves missing?
yes
Refer for replacement pages
no
Are leaves separated from textblock?
no
no treatment
yes
tip in or hinge in leaves

UC Berkeley 6/93

Cornell

Cornell University

Department of Preservation
and Conservation,
701 John M. Olin Library
Ithaca, NY 14853-5301

Conservation Treatment: Types of Binding and Enclosures.

The following types of binding and enclosures are those most often used in the Department, and are listed here to help in the interpretation of specifications. As there are many variations, the list should not be regarded as complete. Where a Manual Guide exists, the number is given as reference to a fuller description.

1. Stiffening. MG-1A (1979). Stiffening is the strengthening of paperback books by reinforcing the joints and covers. It is applied to almost all new paperback acquisitiones, is fully reversible, and relatively inexpensive.
2. Pamphlet Case. The pamphlet case is used for single-section paper-bound pamphlets (i.e. items made up of a single fold) and items thinner than 1/4". The pamphlet is secured into the prefabricated case by glue-tipping onto hinges and wire stapling through the center.
3. Book Repair. MG-25A (1986). Books that are identified as needing repair after circulation are usually partially reconstructed by the full repair method and quickly returned to the shelf.
4. Full Cloth. MG-35A (1988). A general description for a wide range of styles. Full cloth is used by our commercial binder for certain monograph bindings and also for recasing of pre-1850 books in Conservation.
5. Quarter Buckram. An economical and conservationally-sound binding used mainly for periodicals. All records are maintained in the Commercial Binding Office and the binding performed by our commercial binder.
6. Cloth Reback. This refers to the restoration of an original cloth binding rather than the more utilitarian book repair. In this instance, every effort is made to keep the restoration as unobtrusive as possible.
7. Leather Reback. As above, with the original binding restored with underlaid matching leather and tooled as appropriate.

Cornell

8. Quarter Leather. MG 20A (1983). Generally used on pre-1850 books where dictated by size and original structure. This style involves a tight joint, fast back (i.e. leather adhering directly to the back), sewn head and tail bands, vellum tips, paper sides.

9. Quarter Leather: Library Style. MG 19A (1983). Used mainly on large, heavily-used reference books. This style involves a french joint, fast back, vellum tips, and paper sides.

10. Marginal Materials (MM) Case. MG28A (1986). This case is a simple enclosure designed to provide stable security for materials at the shelf. Generally used on: usable books that are too brittle to rebind, but not important enough to replace; items that need to be consolidated, such as a book and map; certain types of loose material. Permanent/durable materials are used for the basic wrap-around structure.

11. Contour Case. This is a variation of the MM Case with a foam board insert. Used to enclose items of mixed media, such as a book and an audio tape.

12. Box: Folding Type. MG GA (1985). This box is designed to enclose and protect: fragile items that must be preserved in original condition; important bindings; certain types of loose materials (e.g. a special group of pamphlets); bindings with clasps or nails; soft-cover bindings such as limp vellum/parchment or early paper; books that need to be contained to keep out dust, such as photo albums.

13. Post Binder. Used in conjunction with a box, the post binder is generally used for books with leaves encapsulated with polyester film.

14. Portfolio. MG 10A (1982). This structure is designed to protect large flat objects, such as collections of prints, maps, broken atlases, etc. The portfolio consists of a buckram case and stable flaps, and must be shelved flat.

MIT LIBRARIES

BINDING AND REPAIR PROCEDURES

REPAIR	PROCEDURES	MATERIALS

PAPER REPAIR

Soiled pages	Surface clean	Opaline pads, Magic Rub erasers
Torn pages	Repair tears	Archival Aids tape Heat-set tissue
Torn pages, rare materials	Repair tears	Japanese paper and methylcellulose

LEAF ATTACHMENT

Loose single pages	Tip-in	PVA mix
Loose signatures	Sew to Japanese paper guard and tip in	PVA mix, needle and thread
Broken adhesive binding	Reglue, fanning pages Send to Acme if extensive	PVA mix
Sewing broken	Send to Acme unless brittle Set aside for Jennifer to review if brittle	Phase box, withdraw, microfilm

MIT

BINDING REPAIR

Loose hinges	Tighten hinges	Wooden dowel, PVA mix, press
Worn/detached spine, endpape intact	Reback	Binding cloth, paper for spine lining, 10 pt. board for spine inlay
Broken hinges, super intact, endpapers in good condition	Reback, reinforce hinge	Binding cloth, paper for spine lining, 10 pt. stock for spine inlay, cambric or Japanese paper for hinges
Broken hinges, super intact, endpapers in poor condition	Reback, replace endpapers	Same as previous plus endpapers
Broken hinges (super split) boards in good condition	Recase with sewn in cambric hinge and original boards Recase with new endpapers and original boards tipped on if adhesive binding sewn on if signatures	Binding cloth, spine lining, hinge cloth Binding cloth, super or cambric, spine lining, endpaper
Broken hinges, super split, boards in poor condition	Return to divisional library with recommendation to send to Acme if paper is good, no rush Recase with new endpapers and new boards tipped on if adhesive binding sewn on for signatures	Binding cloth, board, super, spine lining, endpapers

PAMPHLETS

New single signature pamphlet (primarily music)	Sew into pre-made pamphlet binder or make to size with pockets	Pamphlets, 40 pt. board and binders cloth
Thin single sheets	Side stitch into binders made to size	40 pt. board and cloth

137

MIT

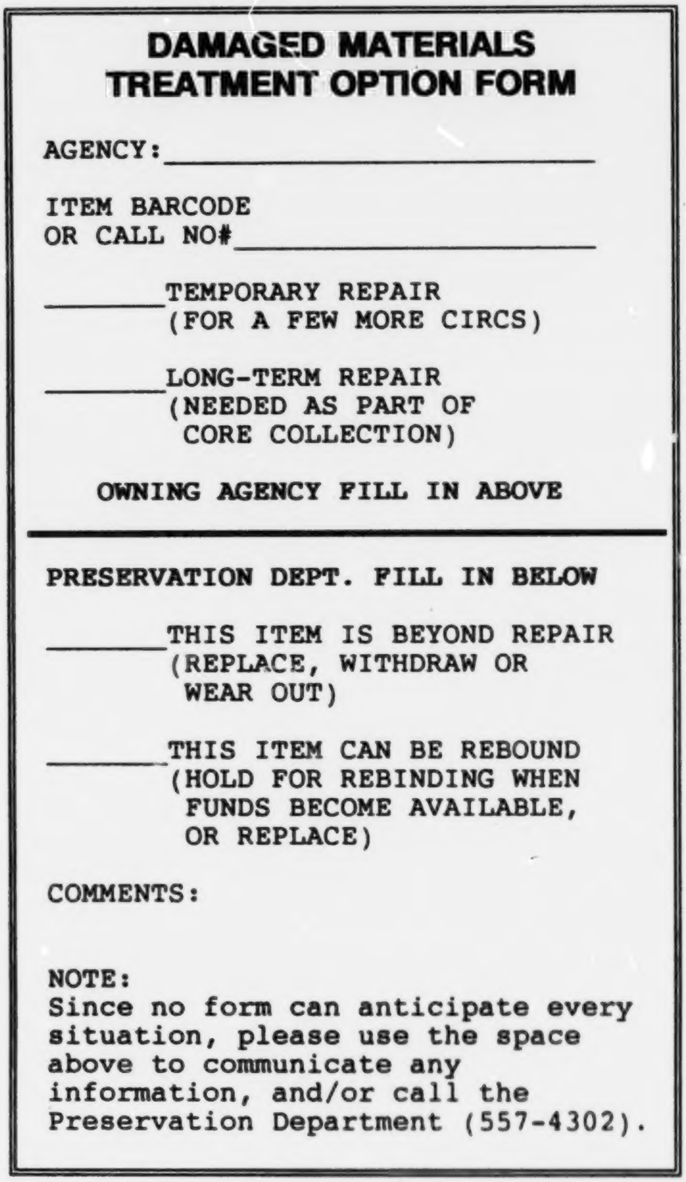
ENCLOSURES

Brittle pamphlet material	Pocket or enclusure in binder made to size	10/20 pt. board for wrapper, 40 pt. board and cloth for binder
Brittle books	In-house phase box	40 pt. board, rivets & ties
Oversize brittle books	Acme	
Folios, collections of maps and plates, oversize material	Portfolio	Binders board, cloth, cotton tape for ties, 20 pt. flaps

Revised 9/16/90

138

SF Public Library



DAMAGED MATERIALS TREATMENT OPTION FORM

AGENCY:________________________

ITEM BARCODE
OR CALL NO#____________________

________TEMPORARY REPAIR
(FOR A FEW MORE CIRCS)

________LONG-TERM REPAIR
(NEEDED AS PART OF
CORE COLLECTION)

OWNING AGENCY FILL IN ABOVE

PRESERVATION DEPT. FILL IN BELOW

________THIS ITEM IS BEYOND REPAIR
(REPLACE, WITHDRAW OR
WEAR OUT)

________THIS ITEM CAN BE REBOUND
(HOLD FOR REBINDING WHEN
FUNDS BECOME AVAILABLE,
OR REPLACE)

COMMENTS:

NOTE:
Since no form can anticipate every situation, please use the space above to communicate any information, and/or call the Preservation Department (557-4302).

BOOKS FOR PRESERVATION TREATMENT

PAPER	DIAGNOSIS	TEXT BLOCK		COMPLETE?		SOLUTION
		Intact	Broken	Yes	No	
Brittle	Paper cannot withstand 3-fold test	X	X	X	X	Preservation case, replace, microfilm, withdraw. Place on review shelf.
Border-line	Paper does withstand 3-fold test, but no more, ie. a slight tug or 4th fold.	X	X	X		In-house binding
		X	X		X	Photocopy missing pages on acid-free paper and send for in-house binding, or replace, microfilm, or withdraw.
Not brittle	Paper withstands 4 -fold and then some, ie. a slight tug.	X	X	X		Send to commercial binder.
		X	X		X	Photocopy missing pages on acid-free paper and send to commercial binders, or replace, microfilm, withdraw.
Gaylord Pamplets						
brittle paper	Fails 3-fold test	X	X	X	X	Preservation case, replace microfilm or withdraw.
paper okay	Passes 3-fold test	X		X		In-house binding.

Pre-1800 imprint - preservation case

1800-1825 imprint - if in original binding have a preservation case made unless volume in hand is part of a set which has some rebound volumes; if covers are missing and paper is okay send for commercial binding.

3-fold test - for books over 100 pages long fold lower corner of page 50
- for books under 100 pages long fold corner of the page located about 1/3 from pg.1

Columbia Univ

4

Pockets

A pocket is a lightweight enclosure added to a bound volume or integrated into the design of a new binding to contain unbound items such as plates, maps, computer diskettes, or other relatively flat objects that accompany the printed text. Pockets may also be fixed by themselves into pamphlet binders to permit shelving unbindable materials in standard library stacks. The design of the pocket depends on such factors as the dimensions of the material to be pocketed, and whether it is to be put into a bound volume or not. Pockets may be constructed of cloth, Tyvek, or paper, and may be designed from scratch or from manufactured envelopes. The design is usually rectangular, closed on three sides, with access through the open fourth side. A pocket may not be appropriate if there is insufficient space within the binding of the accompanying text, or if the size, shape or weight of the material exceeds the strength or structural limitations of the pocket. In such cases alternate enclosures must be used, such as described in the section on Protective Enclosures.

Pockets

Pockets - Cincinnati and Ohio State

Pockets - Ohio University

Pockets - Michigan

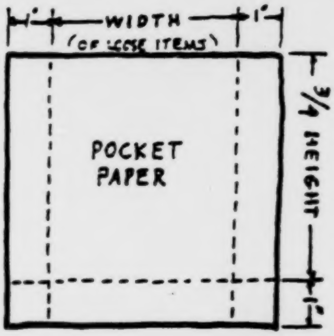
Envelope with Sleeve - Emory

Pocket Binders - Northwestern

Side-Access Pocket for Music Parts - Washington

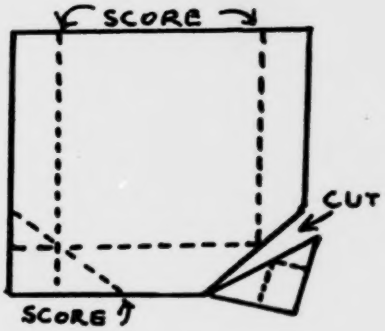
POCKETS

Loose materials that are not part of the book (maps, graphs, etc.) are put in a pocket that is attached to the inside of the back cover. However, if the materials are extremely thick the bulk will cause strain on the binding. In such cases, talk with the conservator or student supervisor about a workable solution.

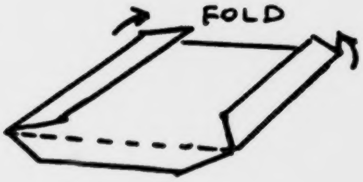

1"
WIDTH
(of loose items)
1"
3/4 HEIGHT
1"
POCKET PAPER

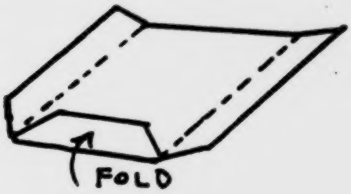
1. Cut bristol or Permalife cover stock slightly wider than the material going into the pocket plus 2" by 3/4 the height of the material plus 1". W+2" X 3/4H+1" The grain runs head to tail.

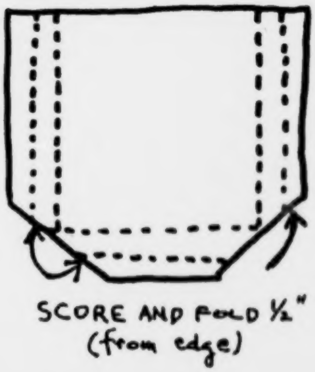
2. Score sides and bottom of material 1" from the edge. Also score diagonally at the corner and cut off the tip.


SCORE
CUT
SCORE

3. Fold the three sides in



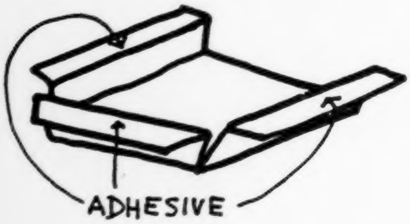


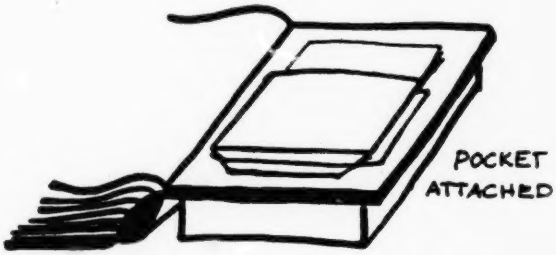

SCORE AND FOLD ½"
(from edge)

4. Turn the material over and score ½" in on each of the three sides. Fold back ½" and 1" from the edge making a reverse fold.

5. Each of the three sides fold into a small, modified accordian fold. Check to to make sure the material fits comfortably inside.

6. Apply PVA or double side tape on the bottom of each fold. Turn the pocket over and affix it inside the back cover where it fits best with the material inside. Bone it well and put under a weight to dry and press in the folds.

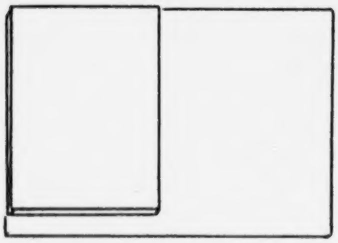




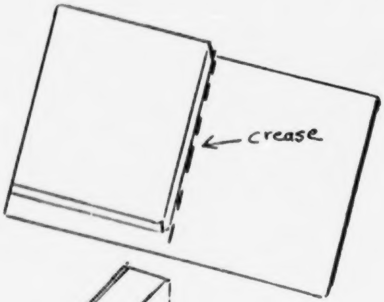
OhioUniv

POCKETS

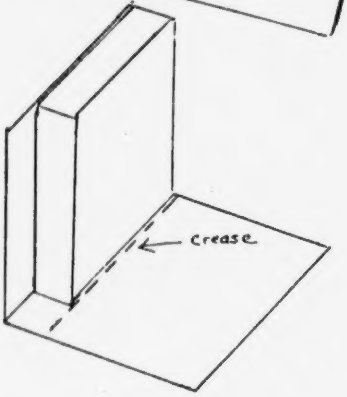
1. Take the material needing a pocket and lay it on a piece of cover text which is at least twice as wide and 1 (one) inch longer than the material. Lay the material on the text so the left side of the material is flush with the edge of the paper. Align the paper so the grain* of the pocket will be parallel with the spine.



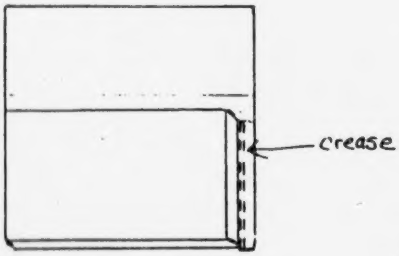
2. With a bone folder crease along the right side of the material and fold the paper along this crease.



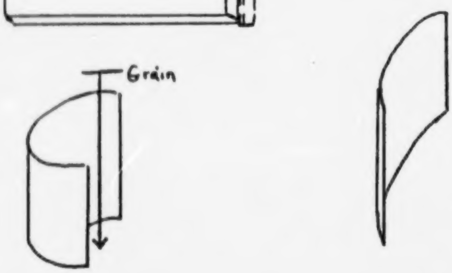
3. If the material is thicker than 1/16th inch, hold the material and pocket in place and crease along the other edge so the pocket conforms to the material.



4. Hold the material in place and crease along the foot of the material on the upper side of the pocket. Fold and crease along the lower side of the pocket if the material is thicker than 1/16th inch.



* Flex the paper gently lengthwise, then flex it widthwise. The grain is parallel to the dimension which flexes easier.



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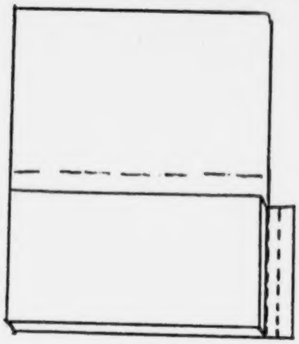
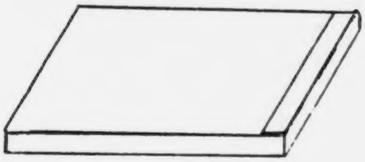
5. Crease along the foot of the material on the lower side of the pocket, trim off this edge.

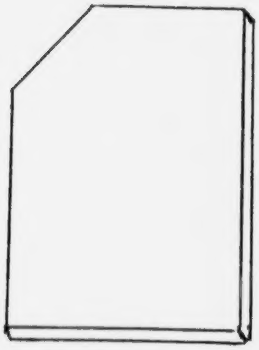


6. Adhere the flap to the lower side of the pocket.



7. Wrap the material in waxed paper, place the material in the pocket and carefully adhere the pocket in place.

8. Cut diagonally across the upper flap of the pocket to ease access to the pocket.



147

UNIVERSITY OF MICHIGAN LIBRARY, BOOK REPAIR UNIT
CONTRIBUTION TO THE BERKELEY CONFERENCE, SPRING 1992

POCKETS

Basic technique: Greenfield pages 104-107

Variations:

- We use tyvek envelopes of different sizes.
- We use LBS pamphlet binders when possible.

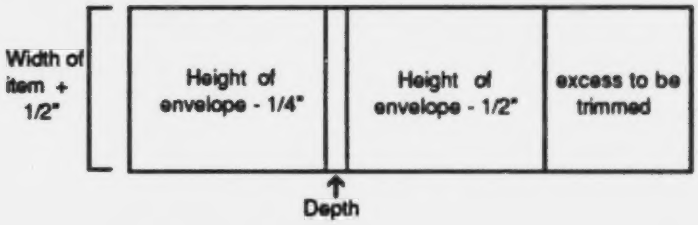
ENVELOPE WITH SLEEVE

Materials:

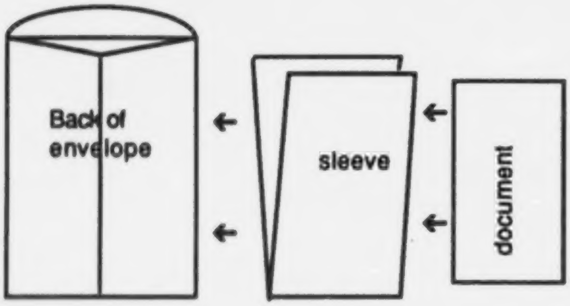
70 lb Permalife paper, or any pH neutral paper of similar weight
alkaline buffered envelopes
pencil
board shear or paper cutter

dividers or calipers
bone folder
ruler
triangle

1. Measure documents to determine the height and width. Measure thickness or depth of each item using dividers or calipers. Use these dimensions to select the appropriate size envelopes. Work in batches of several similar-sized items.
2. Determine grain of paper. Make all creases parallel to the grain.
3. Measure sleeve width to dimension of **document** plus approximately 1/2 inch. Mark each items dimension on strip of paper (assign a batch number if necessary). Cut strip of paper.
4. Measure height of **envelope** minus approximately 1/4 inch and mark on sleeve strip.
5. Mark depth dimension of item on sleeve, using calipers.
6. Mark height of envelope minus approximately 1/2 inch and trim off excess paper.



7. Use point of bone folder to score thickness creases. Bring sleeve against straight edge or triangle to create crease. Reinforce crease with bone folder edge.
8. With pencil, lightly mark call number the top left-hand corner of front (plain side) envelope.
9. Place item (with front facing up) on the longer half of the strip. Fold the shorter half up over the item and slide into pH neutral envelopes. Front of item will face the back of the envelope.



149

'POCKET' BINDERS

For material under 1/4" thick that needs an enclosure.

Material:

Hollinger stock- .10 acid-free
Pamphlet binder (SEMCO)
Tyvek tape

Construction:

1. Make a folder for the item; round the corners.

2. Measure a strip of Hollinger to be, at the width, 3/4" greater than the folder length. The length of the strip should be twice the folder width plus 2".

3. From one end of the strip measure in the width of the folder minus 1/2" and make a mark. Measure further the width of the folder **plus** 1/2" and make a mark. Crease and fold the strip at the marks.

4. The pocket that is formed by the large flap may be sealed at top and bottom with the tyvek tape.

5. The small flap forms a tab that is adhered to the inside of a pamphlet binder of an appropriate size. Be sure the tab is adhered to the inside edge of the back board of the binder.

6. The item is placed into the folder and slipped into the pocket.

sk-92
N.U.Library

Instructions: **Side-Access Pocket for Music Parts**

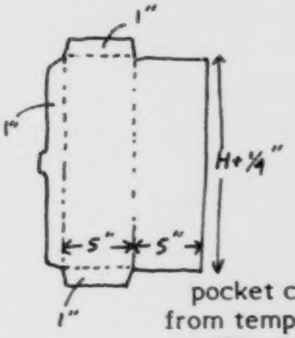
DESCRIPTION

The pocket described here is constructed to contain music part(s) up to 3/8" thick. It is made in relation to the height of the part(s) and adhered inside the back cover of the score binder so that the long side faces the spine. A turn-in and tab at the open edge of the pocket facilitate its use. (see Fig. 4)

MATERIALS

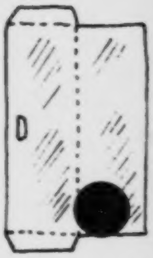
"C" grade bookcloth or equivalent
PVA adhesive

CONSTRUCTION



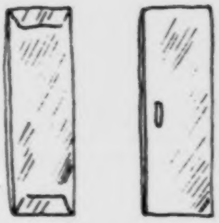
pocket cut
from template
Fig. 1

1. Select a pre-made template which is 1/4" taller than the part(s) the pocket will contain. Using the template, cut a piece of cloth from which the pocket will be constructed. If an appropriately-sized template does not exist, measure and cut the cloth as follows: **11 1/2" wide x height of the part(s) + 2 1/4".** Mark scoring and cutting lines to form the tabs and turn-ins. (see Fig. 1) For parts which are unusually sized, it may be helpful to adjust the pocket proportion (e.g., if the part is very wide, make the pocket wider).



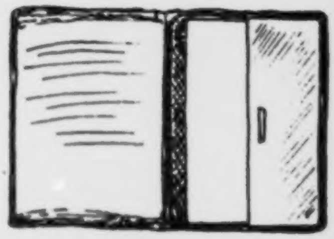
open edge
turn-in finished
Fig. 2

2. To form the turn-in for the pocket opening, score and fold the extension with the tab on it. With the extension folded to the inside of the cloth, mark either side of the tab. Unfold the extension, and cut between the two markings a slit through which to pass the tab. Lightly glue the back side of the extension, fold it back to the inside of the pocket, and pass the tab through the slit. This finishes the open edge of the pocket, and leaves the tab protruding on the outside. (see Fig. 2)



back front
Fig. 3

3. To form the pocket, score and fold the pocket in the center, as well as the tabs at the head and tail. Wrap the tabs to the outside back of the pocket and adhere. (see Fig. 3)



finished pocket adhered
inside back cover
of score binder
Fig. 4

4. Adhere the pocket only to the inside back cover of the binder, positioning it so that the long open edge faces the spine. Allow to dry under light weight for at least one hour.

5. Insert the part(s) into the finished pocket. (see Fig. 4)

K. Leonard/ University of Washington Libraries/ "Trainers" follow-up/ 9-92

5

Protective Enclosures

A protective enclosure is a container or housing, (usually custom-sized), for a book or other library material, that protects the item from mechanical or environmental damage. Protective enclosures may be used as a phased treatment to protect materials until conservation treatment can be provided or until the item can be reformatted, as a substitute for repair or library binding when those options would be inappropriate or impossible, or simply to protect on the shelf fragile items that need no other treatment.

The examples documented here range from substantial boxes requiring binding equipment to construct, to lightweight wrappers that can be made with minimal equipment. Most examples are custom sized to the item and are constructed of chemically stable materials. In addition to these in-house models, several commercial vendors will fabricate custom protective enclosures from measurements provided by the institution. Since setting up to construct protective enclosures can be expensive, especially for phase boxes and drop-spine boxes, and considerable practice is required to become both efficient and accurate, it may be more cost-effective for some institutions to purchase protective enclosures than to make them in-house.

Protective Enclosures

3 Part Wrapper and Wraparound - Michigan

Enclosures - Florida

Enclosure for 5 1/4" Disks and Documentation - Florida

Portfolio - Cornell

Box, Folding Type - Cornell

Marginal Materials Case - Cornell

Phase Box - Ohio University

Self-Closing Wrapper - Cincinnati

Book Wrapper and Pamphlet Case - Northwestern

Phase Box - Northwestern

Wrapper - Emory

Polyester Book Jacket - Emory

Phase Box - Emory

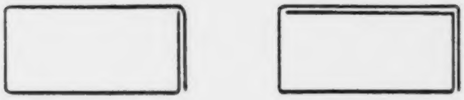
Michigan

WRAPAROUND

Basic technique: Greenfield pages 159-170

Variations:

- We use an additional flap on the horizontal piece. SEE ILLUSTRATION



- We round all corners.
- We fasten the wraparound with rivets, washers, and cord.
- We use PVA to join the two pieces of the wraparound.

THREE-PART WRAPPER

Michigan

Basic treatment: Kyle pages 106-108

Variations:

- Wrapper is constructed with laminated tyvek.
- We round the corners of the tyvek wrapper and the outer case.
- We cut one spine piece the thickness of the wrapped book and one spine piece the thickness of the wrapped book plus one board thickness. The wider piece is used at the spine-edge of the case.
- We cut four pieces of book cloth. Two pieces are cut to the height of the board plus 1 1/2 inches; two pieces are cut slightly shorter than the board height. The two longer pieces are used on the outside of the case and turned in at the head and tail. The shorter pieces are then glued on the inside of the case.

Florida

CONSERVATION UNIT
PAMPHLET BINDING PROCEDURES
ENCLOSURES. 7/17/90

These procedures outline the construction of enclosures. Selection of type of enclosure is discussed in procedures on determination of type conservation treatment #---------.

1.0 DEFINITIONS.

(1.1) Height refers to the dimension of the item parallel to the spine. **(1.2)** Width refers to the dimension of the item perpendicular to the spine. **(1.3)** Depth refers to the thickness of the item across the spine. **(1.4)** Enclosures will include rare book boxes, phase boxes, envelopes, and portfolios. Encapsulations are covered in -----------.

2.0 RARE BOOK BOXES.

(2.1) Follow the instructions in Conservation Treatment Procedures (C. Morrow, pages 142 - 163), in the construction of these boxes. **(2.2)** Using the personal computer file "BOXES", calculate the board sizes. The file will also keep a record of this information.

3.0 PHASE BOXES.

Follow the instructions in Conservation Treatment Procedures, pages 132 -141 in the construction of phase boxes.

4.0 ENVELOPES.

(4.1) Select an appropriate size acid free envelope to fit the item OR **(4.2)** cut an envelope down to fit the item. Material should fit loosely without a lot of room to move around. **(4.3)** Construct a sewn pamphlet case [see procedures, sewn pamphlets], about 2 cm wider all around than the envelope being enclosed. **(4.4)** Install security strip to the back of the envelope. **(4.5)** Glue envelope to the right hand side of the binder. **(4.6)** Set aside until dry.

5.0 PORTFOLIOS.

Follow the instructions in Conservation Treatment Procedures, pages 222 - 229, for the construction of portfolios.

6.0 END PROCESSING.

(6.1) Send to the Preparations and Processing Unit for call numbers and discharging. **(6.2)** Update records and complete statistics as instructed in procedures--------..

Florida

CONSERVATION UNIT
PAMPHLET BINDING PROCEDURES
REINFORCEMENT 7/17/90

These procedures outline reinforcement of paperback materials.

1.0 DEFINITIONS.

(1.1) Height refers to the dimension of the item parallel to the spine. **(1.2)** Width refers to the dimension of the item perpendicular to the spine. **(1.3)** Depth refers to the thickness of the item across the spine. **(1.4)** Paperback reinforcement refers to the technique of adding cloth hinges to the inside joints and thin boards to the inside of the covers. **(1.5)** Pressboard reinforcement refers to adding a pressboard cover and a buckram spine to the paperback.

2.0 SELECTION OF ITEMS FOR REINFORCEMENT.

Reinforced paperbacks are only as strong as their leaf attachment. Brittle paper, weak adhesives, and other problems may make reinforcement impractical. Items for this type of binding should be chosen only by the Conservator or the Senior LTA.

3.0 PAPERBACK REINFORCEMENT.

Follow the instructions in Conservation Treatment Procedures, pages 93 - 97.

4.0 PRESSBOARD REINFORCEMENT.

Follow the instructions in Conservation Treatment Procedures, pages 99 - 104.

5.0 END PROCESSING.

(5.1) Send to the Preparations and Processing Unit for call numbers and discharging. **(5.2)** Update records and complete statistics as instructed in -----------------.

Florida

GUIDELINES FOR PROTECTIVE ENCLOSURE OF 5.25" MAGNETIC DISKS AND THEIR DOCUMENTATION.

These "Guidelines for Protective Enclosure of 5.25" Magnetic Disks and Their Documentation" have been established to promote the longevity of 5.25" magnetic disks in general use by library patrons.

1.0 CONTEXT OF ARCHIVAL STORAGE AND USE.

(1.1) The Archival Copy:

(1.1a) Copyright legislation and legal agreement between the Libraries and software distributors govern creation and use of archival copies, i.e., originals. (1.1b) Whenever possible, archival copies of magnetic disks will have been made by Systems Office personnel, and (1.1c) stored in the Systems Office under optimal environmental conditions. (1.1d) Archival copies are available for duplication when damage or loss of the patron-use copy is suffered dependent upon legal and other factors.

(1.2) The Patron-Use Copy:

(1.2a) Copyright legislation, legal agreement and library policy govern the creation and use of patron-use copies. (1.2b) The patron-use copy enters general use within the Libraries. (1.2c) It is assumed that protective enclosure will extend the longevity of materials in use.

2.0 ROUTING AND CATEGORIZING MATERIALS FOR TREATMENT.

(2.1) The Acquisitions Department receives disks and any accompanying documentation and routes them to the Systems Office. (2.2) The Systems Office duplicates disks and completes legal work. (2.3) The Systems Office stores the archival copy, i.e., original. (2.4) The Systems Office routes the patron-use copy to the Conservation Unit of the Preservation Office, after adding a note formatted as "(p [date])" in the NOTE area of the holdings screen for the particular item. This note serves as indication that the item has left the Systems Office and is in the Preservation Office.

(2.5) Conservation Unit staff treat all magnetic and optical media on a rush basis, i.e., within eight hours of receipt. (2.6) Unit staff separate materials into the following classes for appropriate treatment:

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(a) disk(s) without documentation;
(b) single disk with pre-bound documentation;
(c) multiple disks with pre-bound documentation;
(d) single disk with unbound documentation suitable
    to in-house binding methods;
(e) single disk with unbound documentation requiring
    commercial binding;
(f) multiple disks with unbound documentation suitable
    to in-house side-wire (i.e., staple) binding
    methods;
(g) multiple disks with unbound documentation suitable
    to in-house sew-through-the-fold (i.e., Smythe
    sewn) binding methods;
(g) multiple disks with unbound documentation requiring
    commercial binding; and
(h) other combinations of disks and documentation.

(2.7) Treatment occurs according to specifications outlined below (cf. 3.0 and 4.1 through 4.8). **(2.8)** Following treatment, Conservation Unit staff **(a)** add a note formatted as "(c [date])" in the NOTE area of the holdings screen for the particular item and **(b)** immediately routes the item to the Catalog Department.

3.0 SPECIFICATIONS FOR MATERIALS USED IN CREATION OF PROTECTIVE ENCLOSURES.

(3.1) Primary disk housing material, i.e., envelopes and sleeves, shall be constructed of anti-static Tyvek®. **(3.1a)** Disks with copyright restrictions shall be placed in red Tyvek® envelopes/sleeves, while **(3.1b)** those without copyright restrictions shall be placed in white Tyvek® envelopes/sleeves.

(3.2) Secondary disk housing material, i.e., loose leaf disk binder pages, shall be constructed of anti-static polyester or poly-propylene. Generally, materials constructed of acetates and polyvinyl chloride will be considered unacceptable.

(3.3) Boards, endsheets, stubbing, and other materials used in the process of binding should be lignin free with a minimum pH of 7.0 and maximum pH of 8.0.

(3.4) Adhesives shall be poly(vinyl-acetate) or double-sided tape (i.e., 3M Tape #415). **(3.5)** Staples shall be stainless steel.

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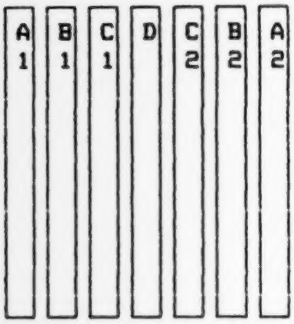
Flander

4.0 PHYSICAL TREATMENT SPECIFICATIONS.

4.1 DISK(S) WITHOUT DOCUMENTATION.

(4.1a) An adequate number of looseleaf disk binder pages, which will serve as secondary disk housing, shall be side-wire stitched (i.e., staple bound) into a pamphlet-binder construction with sufficient stubbing to accommodate disk thickness. (4.1b) The pamphlet-binder shall be constructed as diagramed below.



ORDER OF MATERIALS:

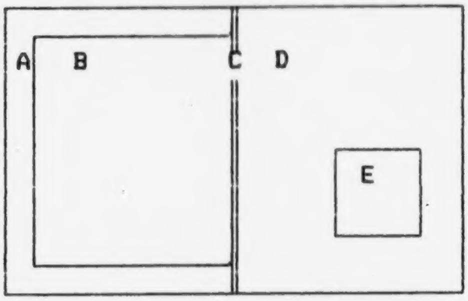
A1 ... Front cover
B1 ... Endsheet (1 leaf)
C1 ... Looseleaf disk binder page
D ... Stubbing (placed between binder pages as necessary)
C2 ... Looseleaf disk binder page
B2 ... Endsheet (1 leaf)
A2 ... Back cover

(4.1c) Each disk shall receive primary housing in appropriate color-coded Tyvek™ envelope/sleeve (cf, 3.1a and 3.1b, above) and (4.1d) placed in the binder pages.

Flanda

4.2 SINGLE DISK WITH PRE-BOUND DOCUMENTATION.

(4.2a) The disk shall be placed in the appropriate color-coded Tyvek™ envelope/sleeve (cf, 3.1a and 3.1b, above) and **(4.2b)** mounted inside the back cover, with placement as diagramed below.

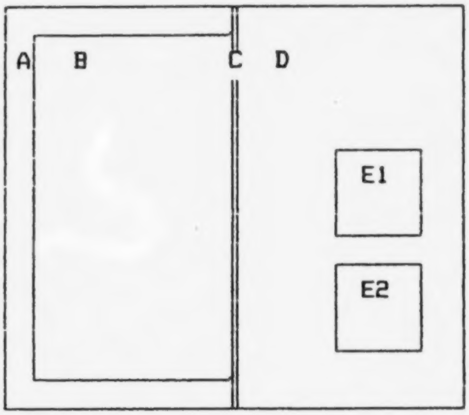


KEY TO PLACEMENT:

A ... Front cover
B ... Textblock resting on front cover
C ... Joint/Hinge
D ... Back cover
E ... Envelope mounted on back cover

NOTE: A single disk, mounted inside the back cover with placement illustrated above, should not result in pressure sufficient to damage either the joint/hinge or the disk.

NOTE: These specifications may also be applied to pre-bound documentation larger than 8.25" by 10.75" with no more than two disks. Placement of the two disks is diagramed below.



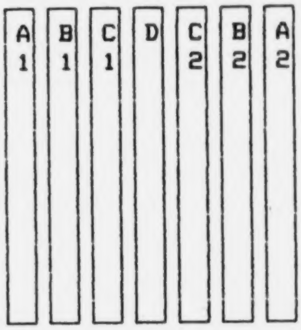
KEY TO PLACEMENT:

A ... Front cover
B ... Textblock resting on front cover
C ... Joint/Hinge
D ... Back cover
E1 .. Envelope mounted on back cover
E2 .. Envelope mounted on back cover

Florida

4.3 MULTIPLE DISKS WITH PRE-BOUND DOCUMENTATION.

(4.3a) An adequate number of looseleaf disk binder pages, which will serve as secondary disk housing, shall be side-wire stitched (i.e., staple bound) into a pamphlet-binder construction with sufficient stubbing to accommodate disk thickness. **(4.3b)** The pamphlet-binder shall be constructed as diagramed below.

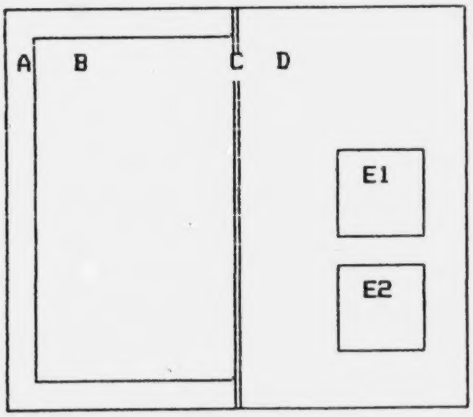


ORDER OF MATERIALS:

A1 ... Front cover
B1 ... Endsheet (1 leaf)
C1 ... Looseleaf disk binder page
D ... Stubbing (placed between binder pages as necessary)
C2 ... Looseleaf disk binder page
B2 ... Endsheet (1 leaf)
A2 ... Back cover

(4.3c) Each disk shall receive primary housing in appropriate color-coded Tyvek™ envelope/sleeve (cf, 3.1a and 3.1b, above) and **(4.3d)** placed in the binder pages.

EXCEPTION: When the size of documentation is larger than 8.25" by 10.75" and no more than two disks are being considered, specifications for single disks with pre-bound documentation (cf, 4.2) may be followed. Placement of the two disks is diagramed below.



KEY TO PLACEMENT:

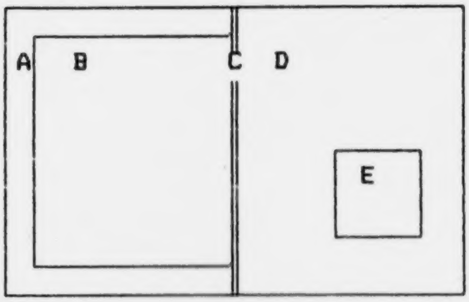
A ... Front cover
B ... Textblock resting on front cover
C ... Joint/Hinge
D ... Back cover
E1 .. Envelope mounted on back cover
E2 .. Envelope mounted on back cover

NOTE: Multiple disks generally cannot be mounted inside the back cover of pre-bound volumes because placement would result in pressure sufficient to damage either or both the joint/hinge or the disk.

Florida

4.4 SINGLE DISK WITH UNBOUND DOCUMENTATION SUITABLE TO IN-HOUSE BINDING METHODS.

(4.4a) Documentation shall be pamphlet bound according to normal Conservation Unit policy and procedures. **(4.4b)** Following pamphlet binding, the disk shall be placed in the appropriate color-coded Tyvek™ envelope/sleeve (cf, 3.1a and 3.1b, above) and **(4.4c)** mounted inside the back cover, with placement as diagramed below.

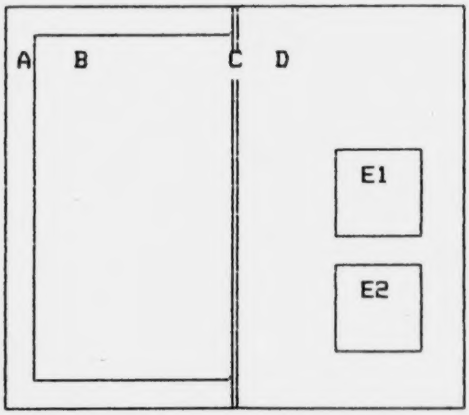


KEY TO PLACEMENT:

A ... Front cover
B ... Textblock resting on front cover
C ... Joint/Hinge
D ... Back cover
E ... Envelope mounted on back cover

NOTE: A single disk, mounted inside the back cover with placement illustrated above, should not result in pressure sufficient to damage either the joint/hinge or the disk. Stubbing may be added to the pamphlet binder as it is made to accommodate the disk if this is considered necessary.

NOTE: These specifications may also be applied to documentation larger than 8.25" by 10.75" with no more than two disks. Placement of the two disks is diagramed below.



KEY TO PLACEMENT:

A ... Front cover
B ... Textblock resting on front cover
C ... Joint/Hinge
D ... Back cover
E1 .. Envelope mounted on back cover
E2 .. Envelope mounted on back cover

Flanders

4.5 SINGLE DISK WITH UNBOUND DOCUMENTATION REQUIRING COMMERCIAL BINDING.

(4.5a) If a "RUSH" processing request has been filed for the item, the Conservation Unit **(4.5a1)** constructs a protective enclosure for the disk following specifications for disk without documentation (cf, 4.1, above), and **(4.5a2)** designs a phase box or temporary leaf attachment/binding for the documentation. **(4.5a3)** Both the disk and documentation are, then, routed to the Catalog Department for "RUSH" processing.

(4.5b) If a "RUSH" processing request has not been filed for the item, **(4.5b1)** the Conservation Unit routes both disk and documentation to the Commercial Bindery Preparations Unit for commercial binding.

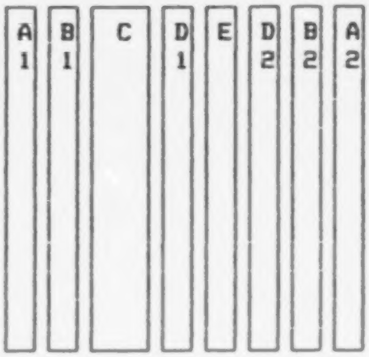
(4.5b2) Preparation Procedures. The Commercial Bindery Preparations Unit prepares the documentation for "rush commercial binding". According to established procedures, **(4.5b2a)** an item record is created for the documentation, **(4.5b2b)** charged out, using the automated circulation system, to the "rush bindery patron ID" and **(4.5b2c)** is sent, via parcel service, to the bindery. **(4.5b2d)** Unit staff will have marked, with an indelible red marker, **(1)** order card or other paper file and **(2)** barcode with the word, "DISK". [**NOTE:** Scanners are able to read through red marker.] **(4.5b2e)** The disk will be stored in a disk file/storage tray and locked within a file drawer for protection until the documentation returns.

(4.5b3) Return Procedures. **(4.5b3a)** Upon return of the bound documentation, via parcel service, the item is discharged and **(4.5b3b)** reunited with its disk. **(4.5b3c)** Both bound documentation and disk are routed to the Conservation Unit which **(4.5b3d)** mounts the disk inside the back cover following specifications for single disk with pre-bound documentation (cf, 4.2, above).

Flander

4.6 MULTIPLE DISKS WITH UNBOUND DOCUMENTATION SUITABLE TO THE IN-HOUSE SIDE-WIRE (i.e., stable) BINDING METHOD.

(4.6a) Following the documentation, an adequate number of looseleaf disk binder pages, which will serve as secondary disk housing, shall be side-wire stitched (i.e., staple bound) into a pamphlet-binder construction with sufficient stubbing to accommodate disk thickness. **(4.6b)** The pamphlet-binder shall be constructed as diagramed below.

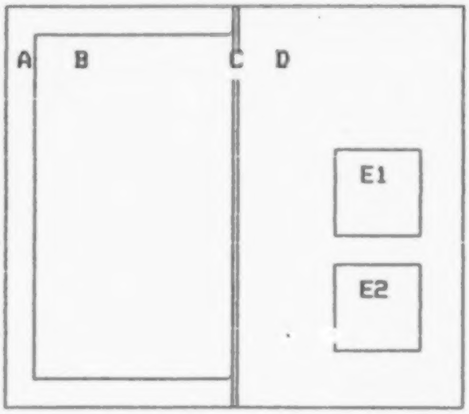


ORDER OF MATERIALS:

A1 ... Front cover
B1 ... Endsheet (1 leaf)
C ... Textblock/Documentation
D1 ... Looseleaf disk binder page
E ... Stubbing (placed between binder pages as necessary)
D2 ... Looseleaf disk binder page
B2 ... Endsheet (1 leaf)
A2 ... Back cover

(4.6c) Each disk shall receive primary housing in appropriate color-coded Tyvek™ envelope/sleeve (cf, 3.1a and 3.1b, above) and **(4.6d)** placed in the binder pages.

EXCEPTION: When the size of documentation is larger than 8.25" by 10.75" and no more than two disks are being considered, specifications for single disks with pre-bound documentation (cf, 4.2) may be followed. Placement of the two disks is diagramed below.



KEY TO PLACEMENT:

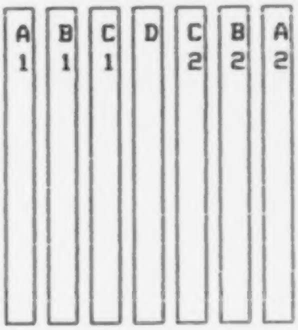
A ... Front cover
B ... Textblock resting on front cover
C ... Joint/Hinge
D ... Back cover
E1 .. Envelope mounted on back cover
E2 .. Envelope mounted on back cover

Flandin

4.7 MULTIPLE DISKS WITH UNBOUND DOCUMENTATION SUITABLE TO THE IN-HOUSE SEW-THROUGH-THE-FOLD (i.e., Smythe) BINDING METHOD.

(4.7a) Documentation shall be bound through the fold, i.e., Smythe sewn, according to Conservation Unit procedures, separate from the disks.

(4.7b) As a separate unit, an adequate number of looseleaf disk binder pages, which will serve as secondary disk housing, shall be side-wire stitched (i.e., staple bound) into a pamphlet-binder construction with sufficient stubbing to accommodate disk thickness. **(4.7c)** The pamphlet-binder shall be constructed as diagramed below.

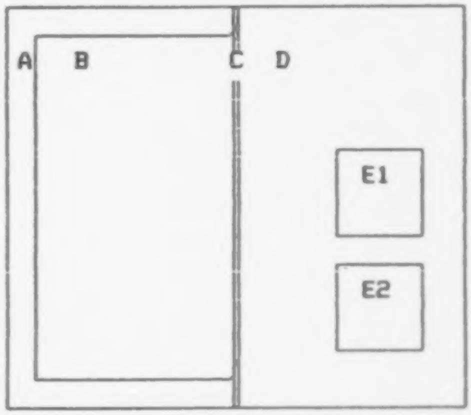


ORDER OF MATERIALS:

A1 ... Front cover
B1 ... Endsheet (1 leaf)
C1 ... Looseleaf disk binder page
D ... Stubbing (placed between binder pages as necessary)
C2 ... Looseleaf disk binder page
B2 ... Endsheet (1 leaf)
A2 ... Back cover

(4.7d) Each disk shall receive primary housing in appropriate color-coded Tyvek™ envelope/sleeve (cf, 3.1a and 3.1b, above) and **(4.7e)** placed in the binder pages.

EXCEPTION: When the size of documentation is larger than 8.25" by 10.75" and no more than two disks are being considered, specifications for single disks with pre-bound documentation (cf, 4.2) may be followed. Placement of the two disks in the back of Smythe sewn documentation is diagramed below.



KEY TO PLACEMENT:

A ... Front cover
B ... Textblock resting on front cover
C ... Joint/Hinge
D ... Back cover
E1 .. Envelope mounted on back cover
E2 .. Envelope mounted on back cover

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4.8 MULTIPLE DISKS WITH UNBOUND DOCUMENTATION REQUIRING COMMERCIAL BINDING.

(4.8a) If a "RUSH" processing request has been filed for the item, the Conservation Unit (4.8a1) constructs a protective enclosure for the disks following specifications for disks without documentation (cf, 4.1, above), and (4.8a2) designs a phase box or temporary leaf attachment/binding for the documentation. (4.8a3) Both the disk and documentation are, then, routed to the Catalog Department for "RUSH" processing.

(4.8b) If a "RUSH" processing request has not been filed for the item, (4.8b1) the Conservation Unit routes both disks and documentation to the Commercial Bindery Preparations Unit for commercial binding.

(4.8b2) Preparation Procedures. The Commercial Bindery Preparations Unit prepares the documentation for "rush commercial binding". According to established procedures, (4.8b2a) an item record is created for the documentation, (4.8b2b) charged out, using the automated circulation system, to the "rush bindery patron ID" and (4.8b2c) is sent, via parcel service, to the bindery. (4.8b2d) Unit staff will have marked, with an indelible red marker, (1) order card or other paper file and (2) barcode with the word, "DISKS". [NOTE: Scanners are able to read through red marker.] (4.8b2e) The disks will be stored in a disk file/storage tray and locked within a file drawer for protection until the documentation returns.

(4.8b3) Return Procedures. (4.8b3a) Upon return of the bound documentation, via parcel service, the item is discharged and (4.8b3b) reunited with its disks. (4.8b3c) Both bound documentation and disks are routed to the Conservation Unit which (4.8b3d) creates a protective enclosure for the disks following specifications for multiple disks with pre-bound documentation (cf, 4.3, above).

Florida

4.9 OTHER COMBINATIONS OF DISKS AND DOCUMENTATION.

Other combinations of disks and documentation are handled by the Conservation Unit at its discretion, but in constancy with the intent of the specifications above.

Cornell University

University Library,
Department of Conservation,
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Ithaca, NY 14853-5301
607/255-9687

PORTFOLIO

Manual Guide No.10A
(1982)

The portfolio is a case designed to protect large flat objects, such as: collections of prints, maps, broken atlases, etc. It consists of an envelope-like inner construction of acid-free board, and a stout buckram-covered outer case secured by tape ties. In general, the portfolio is intended for objects likely to be shelved flat rather than on edge.

Materials.

An acid-free, permanent/durable board of approximately 20 point thickness, such as Library Board from the Process Materials Corporation, is needed for the inner flaps, Davey Red Label binder's board of .074" or .098" thickness, good quality buckram, and a P.V.A. adhesive for the outer case. Permalife Text paper for the case lining, and linen tapes for the ties. Strips of Hollinger board.

Equipment.

If available, a conventional binder's board shear, or heavy office guillotine capable of cutting across the board width.

1 bone folder
1 pair scissors
1 steel ruler (preferably 18" long,
  showing both inches and centimeters)
1 wood chisel (same width as tape)
1 medium glue brush

Measurement Formula and Flap Construction.

The flaps consist of three basic pieces designed to envelope the object. If the object is less than 3 centimeters in thickness, the flaps are measured as follows: assuming an object of 30.3 (height) x 26.0 (width) x 2.0 (thickness), (see figure 1), the first board is cut to the width of the object, by approximately two and one half times the height plus twice the thickness, 26.0 x 30.3 + 30.3 + 15.1 + 2.0 + 2.0 (26.0 x 79.7). The board is cut and folded as shown at figure 2. Please note that the board must not be scored with a sharp object, but rather folded against a straight edge.

The two side flaps are the height of the object, by two thirds the width (approximate), plus the thickness, plus 4.0 centimeters, 30.3 x 18.0 + 2.0 + 4.0 (30.3 x 24.0). The boards are cut and folded as figure 3, and glued together as shown in figure 4.

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If the object exceeds 3 centimeters in thickness, reinforcement strips should be glued onto the inside of the flap walls, and allowed for by adding the thickness of the Hollinger board reinforcement to the object width and twice the thickness to the object height of the first flap. As Hollinger board is only 0.2 centimeter in thickness, the formula would be adjusted as follows, for an object of 30.3 (height) x 26.0 (width) x 3.5 (thickness). The first flap would measure 26.0 + 0.2 x 30.3 + 0.4 + 30.3 + 15.1 + 3.5 + 3.5 (26.2 x 83.1). The two side flaps are measured, cut, and folded, as previously described, and glued together as figure 4. The two reinforcement strips for the first flap walls are cut to the thickness of the object by the flap width (3.5 x 26.2) and glued into the inside flap walls with the white board surface showing. The reinforcement strip for the outer (right-hand side) side flap is cut to the height of the object (note: this is 0.4 centimeters shorter than the height of the flap) by the object thickness (30.3 x 3.5), and glued into position as noted in figure 5.

Outer Case.

The object is enveloped in the flap construction, which must fit snugly with even walls and corners, and measured for the outer case. Two boards are cut to the exact height of the "package," by the exact width. The spine boards should be the same height as the other boards, and the same width as the thickness of the package, plus the combined thickness of the two boards (see figure 6). The case is covered in buckram in the usual way, leaving a joint of roughly 1 1/2 times the boards thickness. Spine lettering should be done at this stage.

Ties.

For cases shorter than 30.0 centimeters, linen tape ties must be inserted at the foredge only, 2.0 centimeters in from the foredge, and 5.0 centimeters in from the head and tail (see figure 7). Slots should be cut through the boards with a wood chisel of the same width as the tape, cutting from the outside with the chisel bevel towards the edge. The tapes are slotted through the slots, leaving a 3.0 centimeter length of the inside of the case, and enough tape on the outside for comfortable tying. The slot is hammered flat from the inside and the tape glued down.

Cases exceeding 30.0 centimeters should have ties at foredge (two) and at head and tail. The foredge tapes should be 2.0 centimeters in from the foredge, and 10.0 centimeters in from head and tail. The head and tail tapes should be a similar distance from the edges, but centered (see figure 8).

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Case Lining

For cases shorter than 30.0 centimeters, the case should be lined with a piece of Permalife Text paper on the inside of the front board, the lining extending in width across the spine and 3.0 centimeters beyond onto the back board (see figure 9 A).

For cases longer than 30.0 centimeters, the case should be lined with a strip of buckram down the spine, and Permalife Text on the inside of the front board (see figure 9 B).

Construction.

The back of the package (i.e. flap construction enclosing object) is thoroughly glued, and laid into position on the inside of the back board. The case is closed, and the package pushed flush with the inside of the spine and the head and tail. The completed case is placed between boards with the spine free, and weighted. Excessive pressure can unduly compress the object and buckle the flap walls, so do not press.

Carnell

figure 1

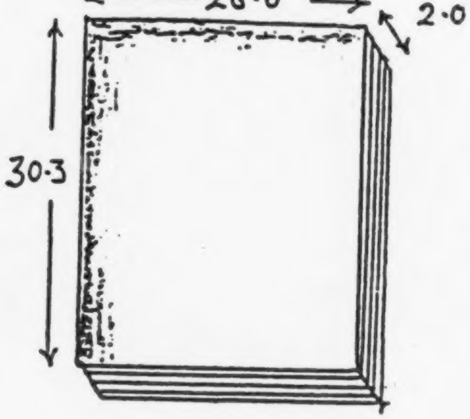


figure 2

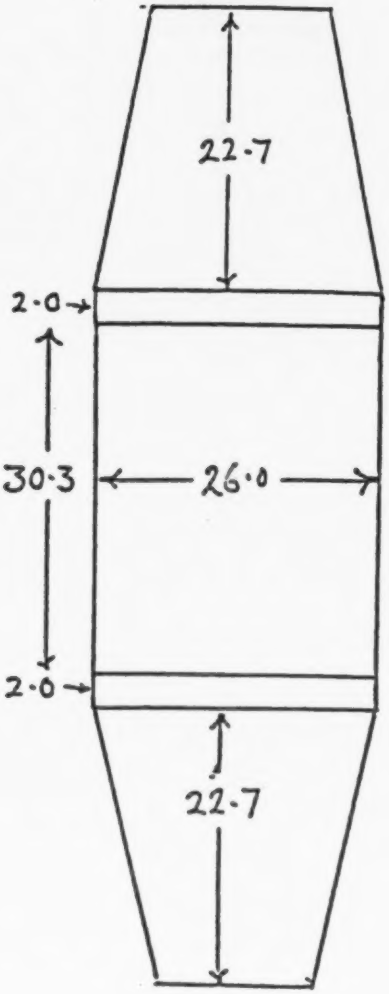
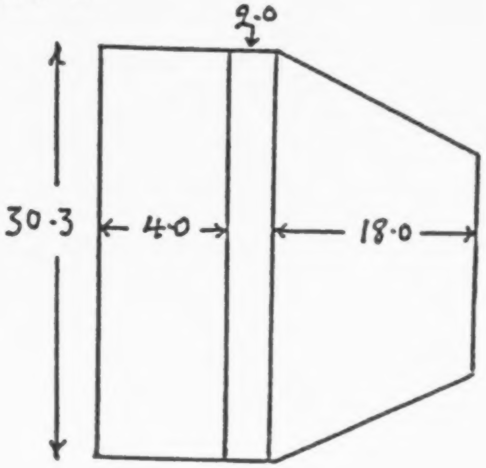

22·7
2·0
30·3
26·0
2·0
22·7

figure 3


2·0
30·3
4·0
18·0

Cornell

Figure 4

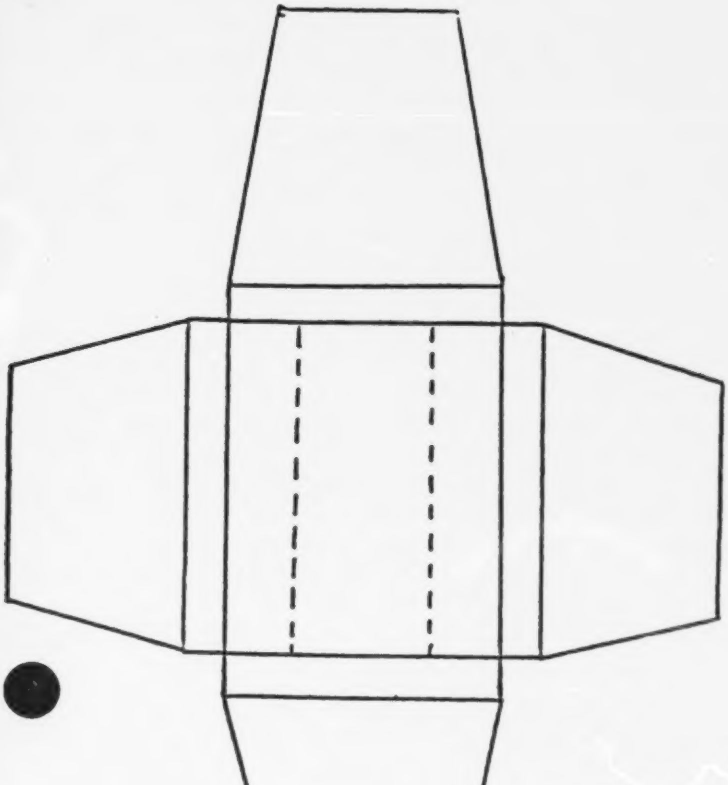
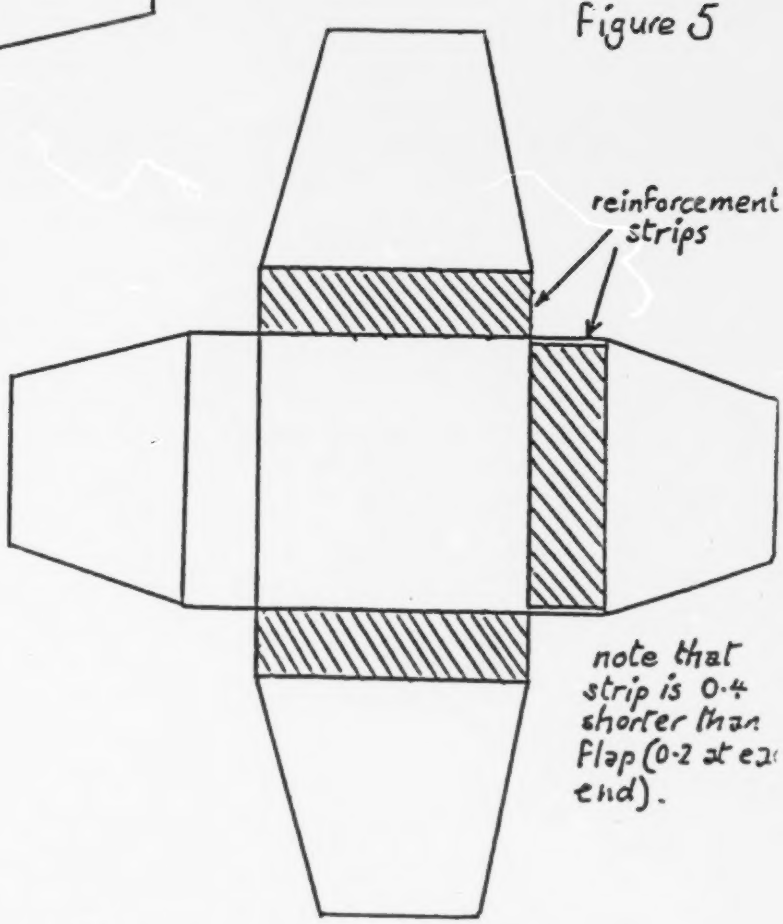


Figure 5


reinforcement
strips

note that
strip is 0·4
shorter than
Flap (0·2 at ea
end).

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Figure 6

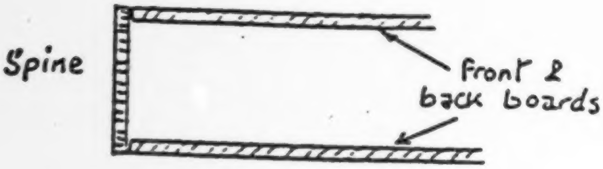

Spine
front & back boards

Figure 7

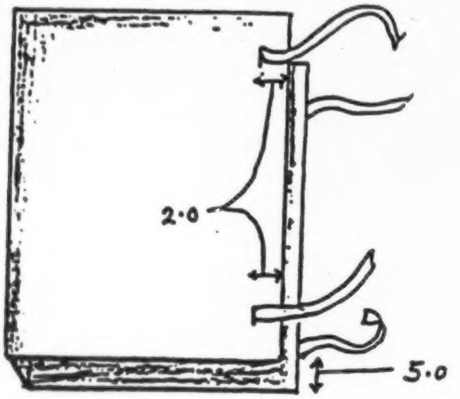
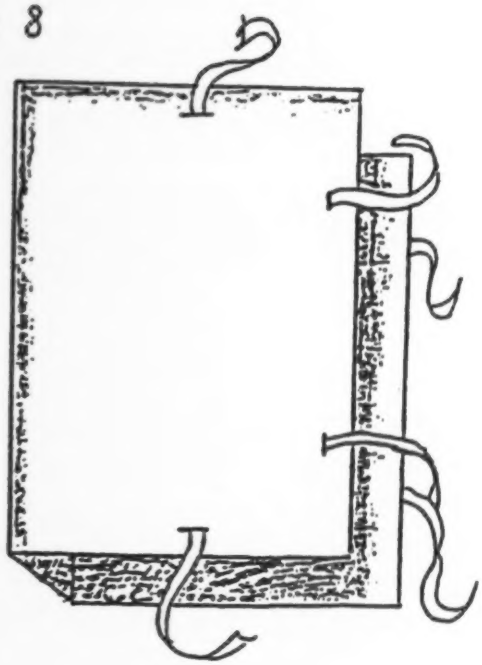


figure 8



Cornell

figure 9A

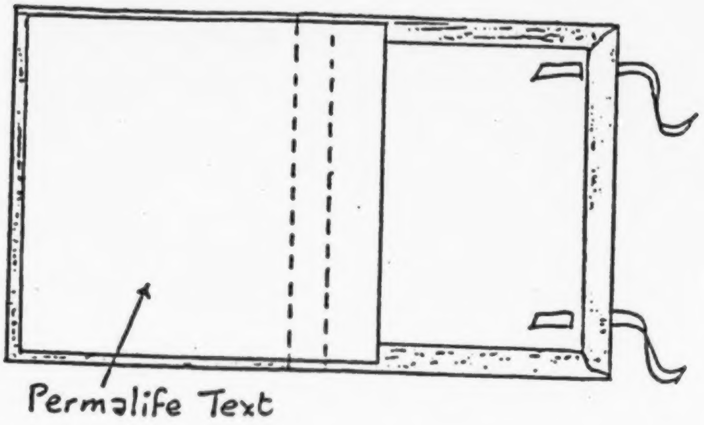
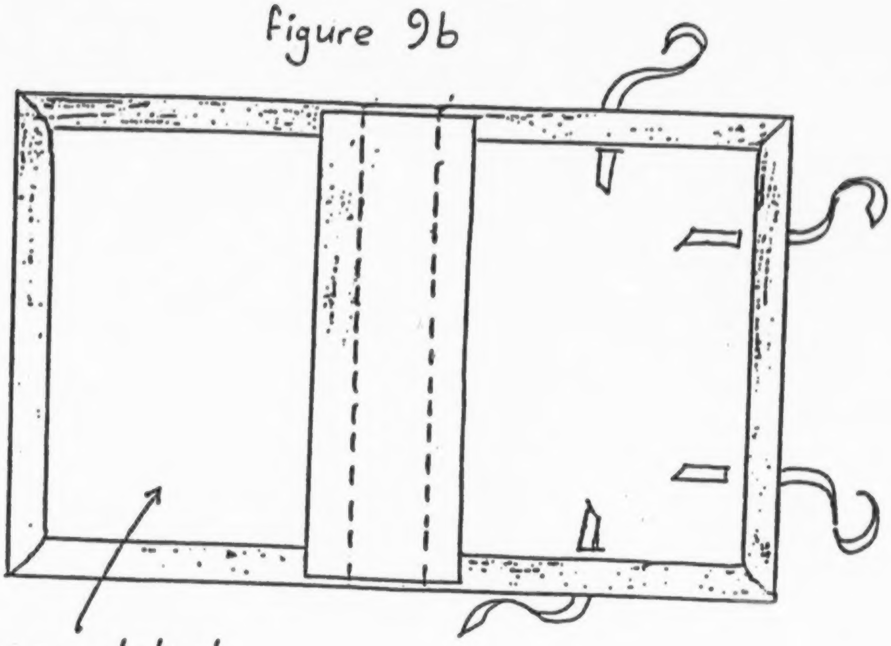

Permalife Text

figure 9b


Lining to be completed
with Permalife Text

Cornell University

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Ithaca, NY 14853-5301

607/255-9687

BOX. FOLDING TYPE Manual Guide No. 6A (1985)

The type of box described below completely encloses the protected item, and is recommended for the protection of: fragile items to be preserved in original condition; important bindings; certain loose materials; bindings with clasps or nails. The description deals with a construction for average size/weight items; extra large and/or heavy objects should have the basic construction reinforced. The box consists of three basic parts: lower tray; upper tray, and outer case.

Measurement Formula.

The item to be boxed is measured by height, width, and thickness, in centimeters as shown in figure 1. Assume as a model, a book measuring 20.3 (height) x 13.0 (width) x 2.2 (thickness). To the height, add twice the thickness plus .4 centimeters. To the width, add the thickness plus .2 centimeters as shown below:

20.3(h)	x	13.0(w)	x	2.2(t)
4.4		2.2		
.4		.2		
25.1		15.4		

A piece of board, preferably acid-free (the Bindery uses Hollinger barrier sheet board, 27 3/4" x 33", .052") and .050" to .059" in thickness, is cut to the resultant measurement of 25.1 x 15.4. This piece will form the lower tray.

A similar piece of board is cut to form the upper tray by adding 1.2 to the height (25.1 + 1.2 = 26.3) and .6 to the width (15.4 + .6 = 16.0) for a finished size of 26.3 x 16.0. (If a thin covering material is to be used rather than buckram, only 1.0 centimeters should be added to the height).

If a large box is to be made, to house an unusually heavy object, the walls of the trays may be reinforced by gluing pieces of 0.98" binders board to the outside of the walls (see figure 7). In this case, the size of the upper tray measurement must be increased by .8 to the height and .4 to the width resulting in an amended size of 27.1 x 16.4. The other portions of the formula remain the same.

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Scoring and Creasing.

The two boards are next scored or creased to form the walls of the trays. The smaller board for the lower tray (25.1 x 15.4) is scored the measurement of the thickness (2.2) on three edges, as shown in figure 2A.

The larger board for the upper tray (26.3 x 16.0) is scored the measurement of the thickness plus .3 centimeters (2.2 + .3 = 2.5), as shown in figure 2B. The corners of both boards are next cut out, as shown in figure 3, and the tray sides folded upright. At this stage, the upper tray should be placed over the lower to ensure exact fit.

Cloth Cutting.

Two strips of cloth are now cut to cover and support the sides of the two trays. The length of the cloth pieces is gained by adding 3.0 centimeters to the perimeter of the three tray sides of the upper (large) tray, as shown in figure 4B.

In this case, the resultant size is 51.7 x 7.8. The cloth should be cut with the grain running parallel to the longest edge.

Covering the Trays.

A piece of cloth is glued thoroughly, and the upper tray laid onto it as shown in figure 5. The cloth is wrapped tightly around the tray, cuts made as appropriate (see figure 6A and 6B), and the cloth turned in. Great care in rubbing the cloth down should be taken, ensuring that corners and angles are fitted snugly.

Outer Case.

The outer case is made up of a front and back board, and a board spine strip. The board should be .074" in thickness for small boxes and 0.98" for large boxes. The front and back boards should be cut to the exact height of the upper (larger) tray, but leaving a small square at the foredge. The spine board should be the same height as the other boards, and the same width as the upper tray sides, plus the thickness of one of the front and back board (see figure 6C). The case is covered in buckram in the usual way, leaving a joint of roughly 1 1/2 times the thickness of the board. At this stage, spine lettering should be done.

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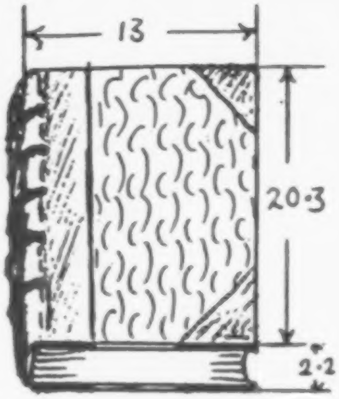
Construction and Lining.

The base of the lower (smaller) tray is glued, and laid into position on the inside of the back boards flush with the inside edge. The base of the upper tray is next glued, and the tray laid carefully over the lower tray. The outer caseis pulled over into position, and the trays and case squared up. The book is next placed into the box, and the whole placed under a weight, the spine protruding over the edge of a pressing board.

When the glue is set, a strip of cloth is glued over the inside of the spine, lying onto the inside of each tray approximately 2.0 centimeters. The joint must be carefully worked to prevent later loosening. Two pieces of Permalife Cover stock or Permalife File-Folder stock should be cut to fit comfortably on the inside of the lower try. These are glued and set carefully into position. the upper piece being centered against the inside edge.

Cornell



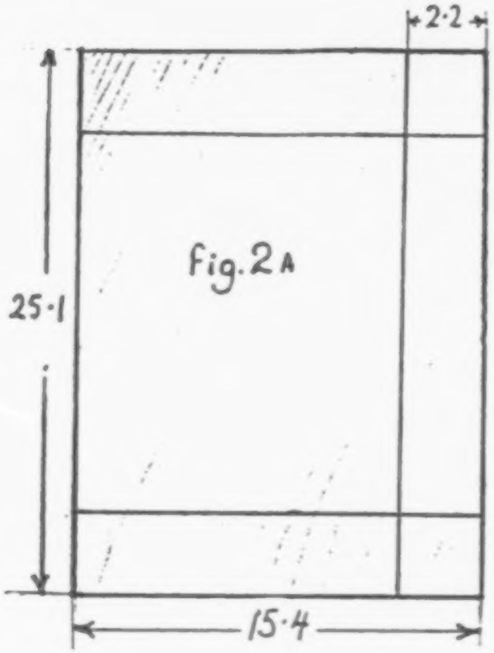


fig. 2A

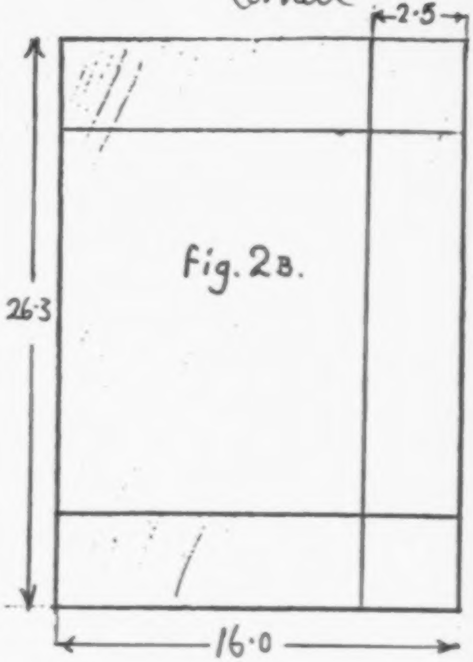


Fig. 2B.

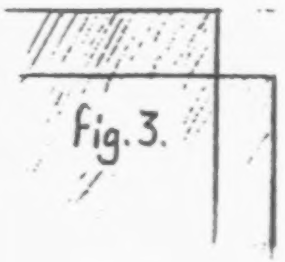


fig. 3.

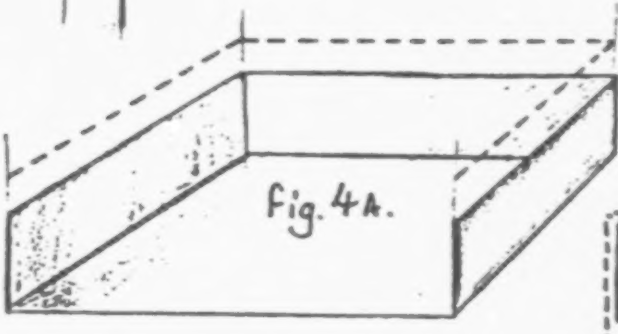


fig. 4A.

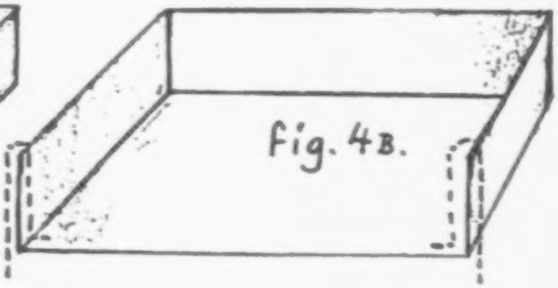


Fig. 4B.

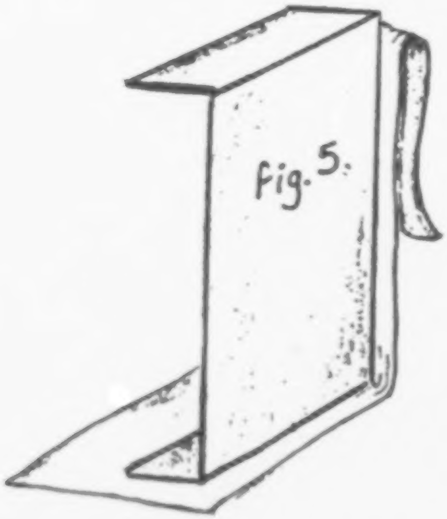
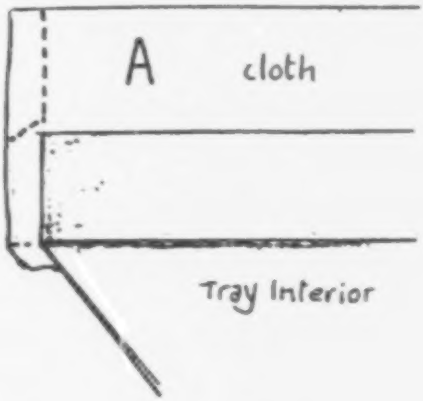


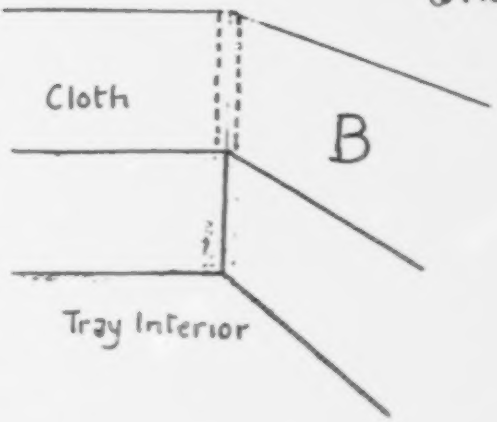
fig. 5.

178

Figure 6

Cornell


A
cloth
Tray Interior


Cloth
B
Tray Interior

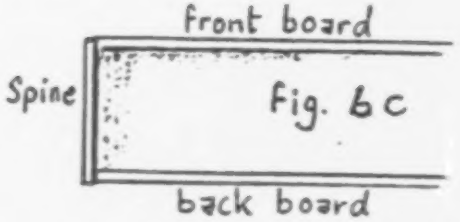
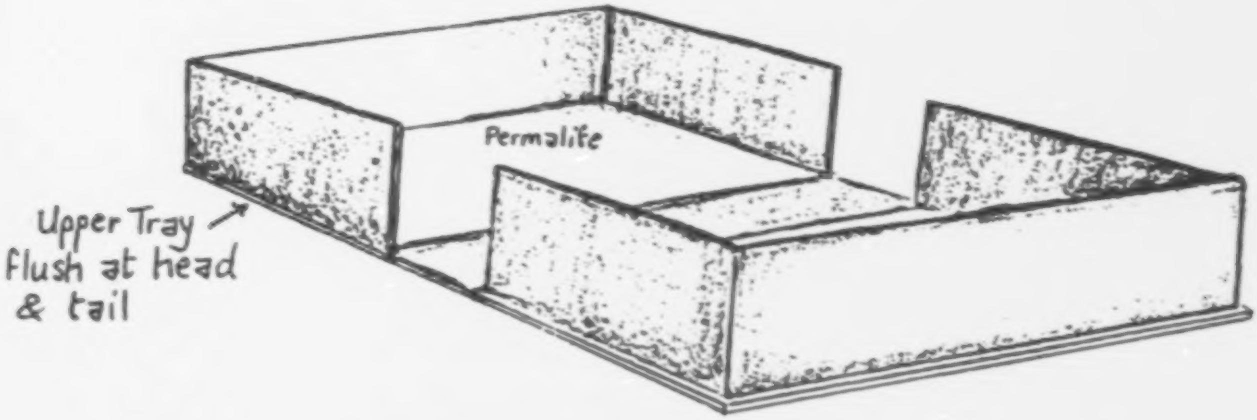
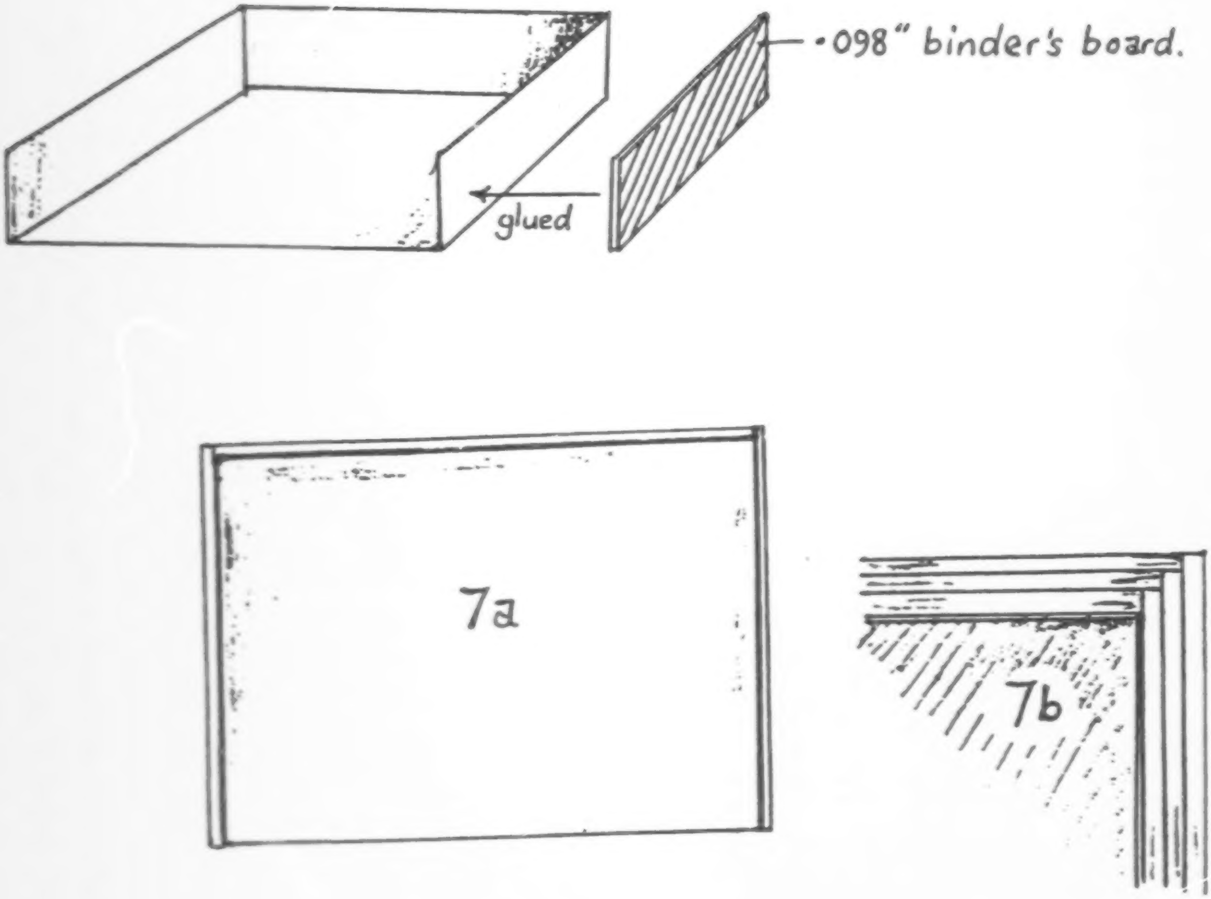


Fig. 6c
front board
Spine
back board


Permalife
Upper Tray
flush at head
& tail

Cornell

figure 7



Note: If extremely heavy boxes are required, additional layers of .098" binder's board may be glued on in a corner-lapping fashion, as shown at figure 7b. The measurement formula should be adjusted by the addition of .8 to height and .4 to width for each layer. As noted in the general intstructions, the addition need only be made to the dimension of the upper board tray.

Cornell University

University Libraries,
Department of Conservation,
214 John M. Olin Library
Ithaca, NY 14853-530

607/255-968

Marginal Materials (MM)Case. Manual Guide. No.28A (1986)

The MM case is a simple enclosure designed to provide stable security to damaged materials at the shelf. The tape ties are designed to provide compression as well as security, thus the structure, though light, may be used on quite large books. The following are typical uses:

(A) usable books which are too brittle to bind, yet not important enough to replace with film etc;

(B) little-used damaged and/or deteriorated books marked for storage;

(C) materials which are incomplete, but which cannot be rendered complete by the usual means (photocopy etc);

(D) rare materials, scheduled for extensive treatment at some later date.

The case must not be used as a means of avoiding necessary collection development decisions on relevance, replacement etc, or as a purely cosmetic measure to "tidy up" the shelves. Because permanent/durable materials are used, no modifications are necessary for rare items.

Materials.

An acid-free, permanent/durable board of approximately 20 point thickness. Process Library Board from the Process Materials Corporation serves very well. Strong unbleached tape of approximately .7 centimeters (1/4"), and a small container of a P.V.A. adhesive.

Equipment.

If available, a conventional board shear, or heavy office guillotine which must be wide enough to cut across the board width; if not available, a knife and metal straight-edge should be used.

1 bone folder
1 pair scissors
1 steel ruler (preferably 18" long, showing both inches and centimeters)
1 wood chisel, same width as tape
1 small glue brush
scrap binders' board

Cornell

Measurement Formula.

The case consists of two pieces of board designed to wrap the item from front to back and from top to bottom. Assume as a model a book measuring 20.3 (height) x 13.0 (width) x 2.2 (thickness), shown as figure 1. The first board is cut to the height of the book, by three times the width plus twice the thickness, 20.3 x 13.0 + 13.0 + 13.0 + 2.2 + 2.2 + = 33.4, and scored and folded accordingly (see figure 2).

The second board is cut to the width of the item by two and one half times the height plus twice the thickness, 13.0x20.3 +20.3 + 10.1

Cornell

Figure 1.

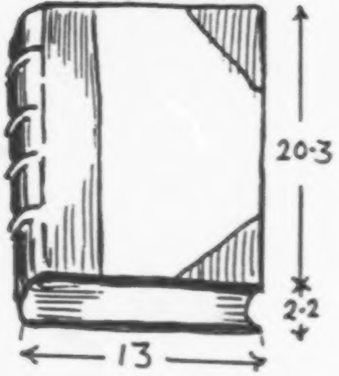
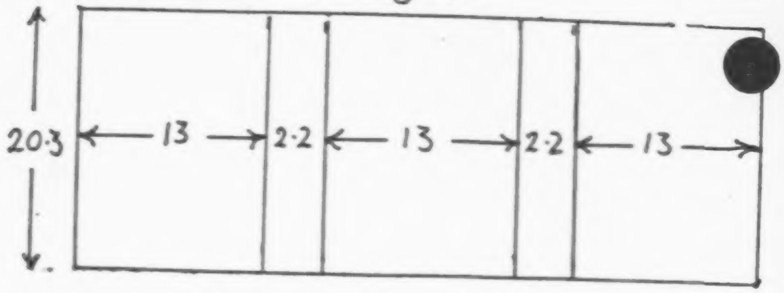


Figure 2


20·3
13
2·2
13
2·2
13

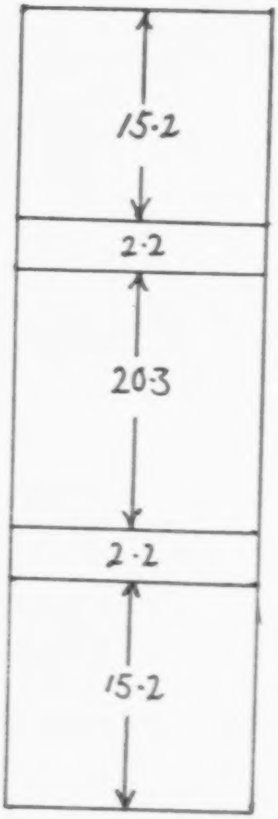
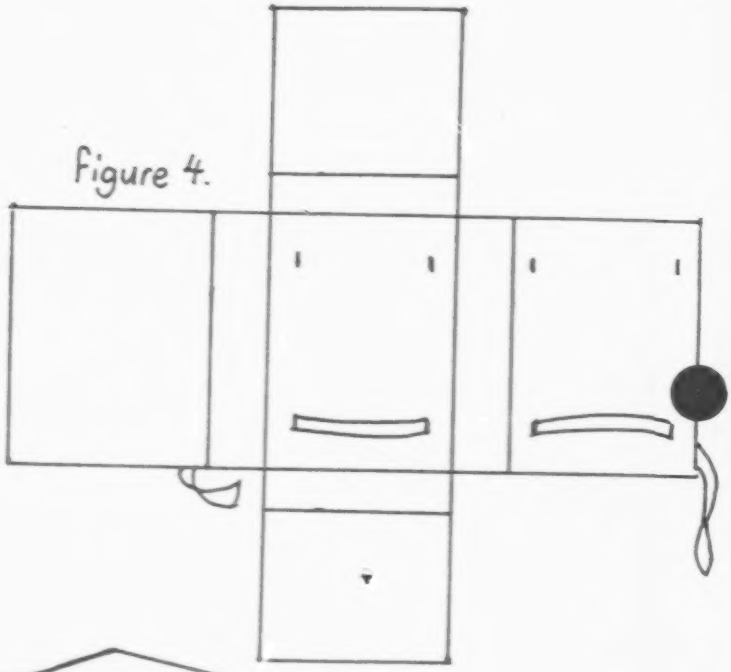

15·2
2·2
20·3
2·2
15·2

figure 3

figure 4.



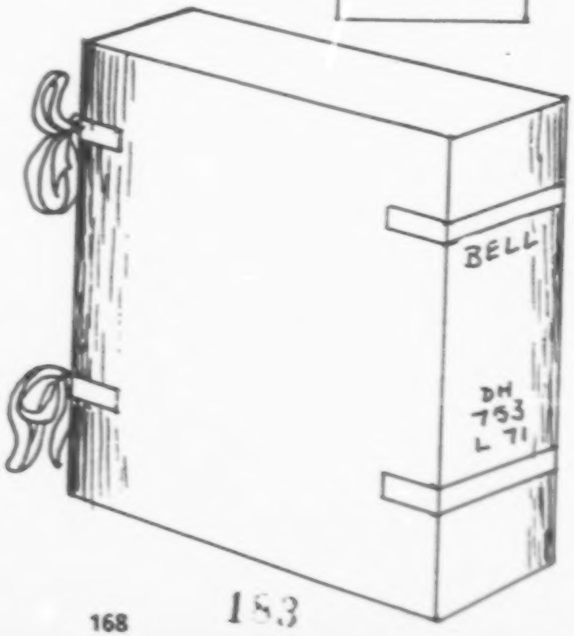

BELL
DH
753
L 71

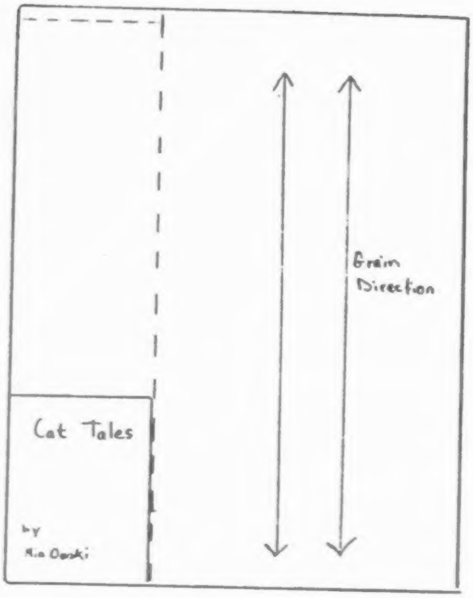
figure 5.

Ohio Univ

PHASE BOXES

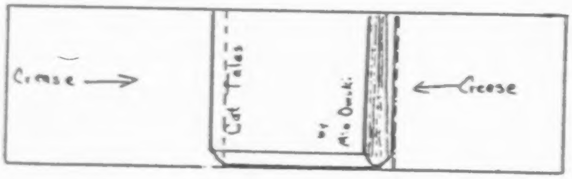
NOTE: Phase boxes can be made for materials at least 1/2 inch thick; materials thinner than 1/2 inch are placed in wrappers which are constructed the same way as phase boxes, but out of folder stock instead of barrier board.

1. Cut a piece of barrier board exactly the width of the book and three times the length. Be sure the grain runs parallel with the spine of the book. Find the grain by flexing the width and then the length of the barrier board. The dimension which flexes easier has the grain running parallel with the hand held sides of the board. So one side of the board which you held will be parallel to the spine.



2. Place the book in the center of this barrier board strip.

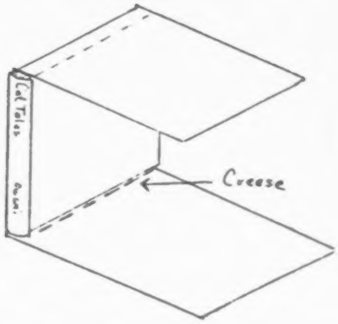
3. With pencil or bone folder mark the foot of the board and crease with the creaser. Mark the head of the board and crease with the creaser.



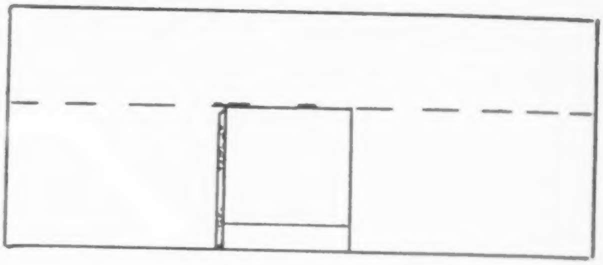
4. Fold up along the creased lines.

ohio univ. s.lunas 12/90

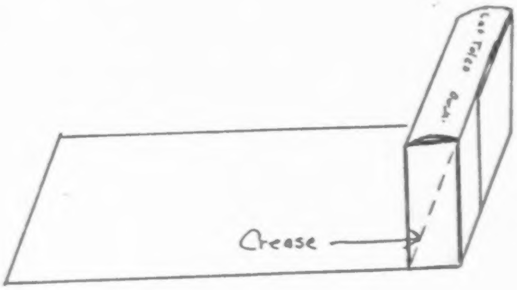
Ohio U


Cat Tales
Book
Crease

5. Stand the book and partially folded board on their heads, mark and crease and then turn the package on their tails and mark and crease this fold.

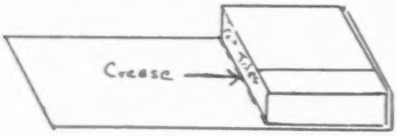


6. Cut a piece of barrier board exactly the height of the partially wrapped book and three and a half times the width of the volume.

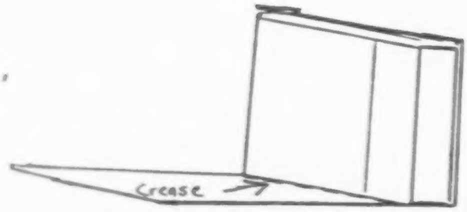

Cat Tales
Book
Crease

7. Place the volume so the upper board's fore edge is flush with the edge of the board. Mark the other side of the fore edge and crease.

8. Fold up the fore edge.


Crease
Cat Tales

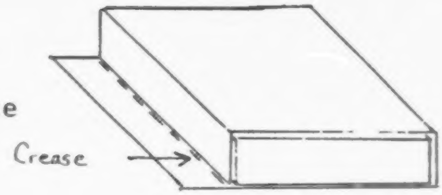
9. With fore edge folded up, mark the spine crease, crease and fold up.



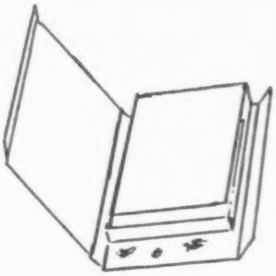
10. Mark the other spine crease, crease and fold.

ohio univ. s.lunas 12/90

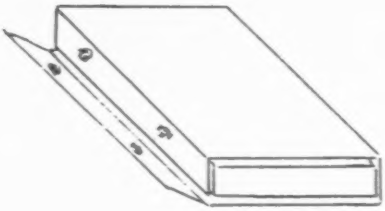
11. Mark the fore edge crease, crease and fold.



12. Dab a few spots of pva onto the center of the horizontal piece of the phase box. Position partially phase-boxed book over the horizontal piece and press firmly into position .



12. Adhere the hook and loop fasteners to the fore edges of the box.

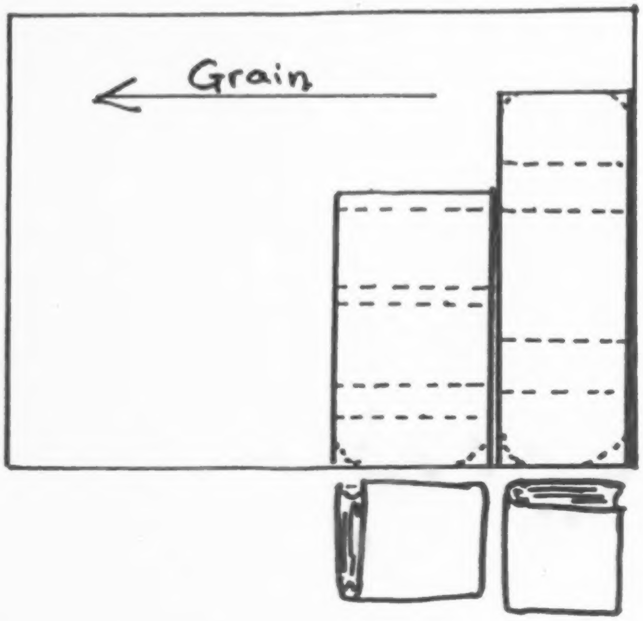


SELF CLOSING WRAPPER

Adapted Kyle Method

This enclosure is made from 20 pt. Library Board. Two pieces are cut - one is horizontal and the other is vertical. Each piece is folded around the book at a right angle to each other and attached to each other. The pieces are cut so that the folds are parallel with the grain of the board.

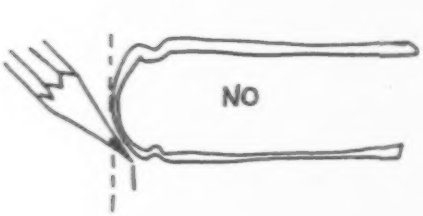
If you are making wrappers for a set of books (all the books are the same size), cut all the vertical pieces at one time and then all the horizontal pieces.

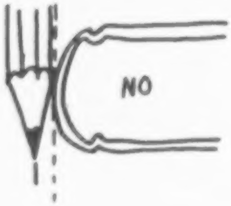


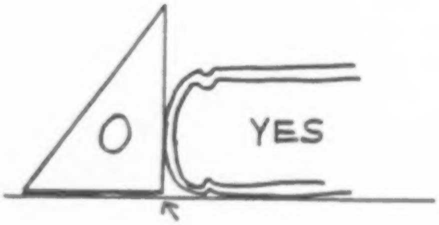
Some general points to remember about measuring enclosures are -

a. Books are not always straight and square. Old and/or damaged books often have distorted shapes. Measurements are taken from the thickest or the widest part of the book.

b. When measuring don't "eyeball". Use a triangle to mark curved surfaces of the book as illustrated below.





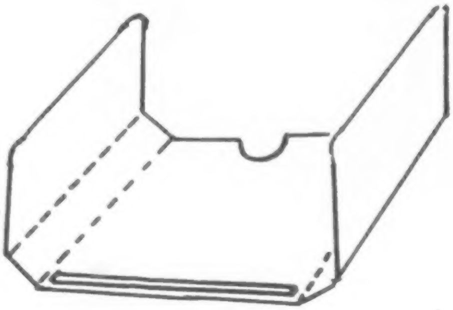


Preparing the Vertical Piece:

1. Cutting. Place the book flush with the edge of the board and mark the width of the book as shown above. Cut the strip. Measure the length 2½ times the height plus 2 thicknesses (W X 2½H + 2T). You may need to trim back one or both of the flaps after folding them around the book if they are too long.

2. Folding and Creasing. Place the book in the center of the vertical piece. Fold the extending portions around and crease against the top and bottom edges of the book. Lay the book aside and sharpen the creases with a bone folder making sure the top and bottom edges of the piece match.

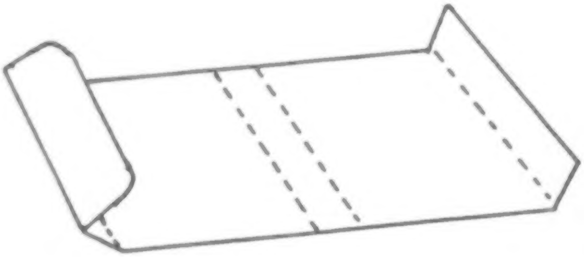
3. Finishing Steps. Find the middle of the strip and cut a thumb notch on one side. Use the adjustable compass. Cut notch with a scalpel on your green self healing mat.
   Place a strip of double sided tape on the opposite edge from the thumb notch. Round all corners.



Preparing the Horizontal Piece:

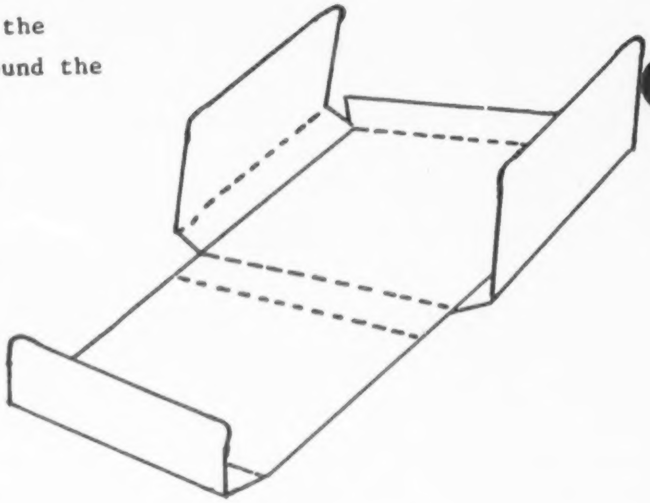
1. Cutting. Place the book at right angle from what it was when you cut the vertical piece and mark the height of the book. Cut the strip. The length of this piece is equal to two widths of the book plus three thicknesses and 2". (H X 2W + 3T + 2"). The flaps may need to be trimmed if they are too long after folding them around the book.

2. Folding and Creasing. Make the first fold a little less than one thickness from the right side edge and stand it up. Push the book against this standing fold and continue to fold and crease around the book. Sharpen all folds with a bone folder.

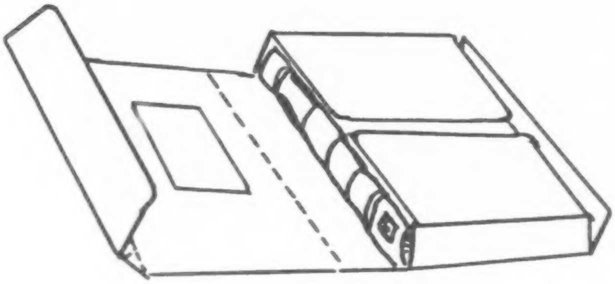


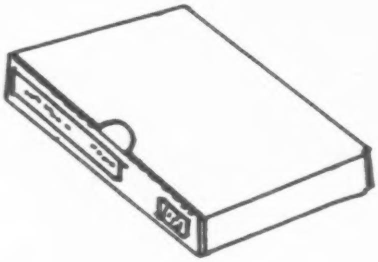
3. Finishing Step. Round the corners of the 2" flap 3/8".

Putting the Vertical and Horizontal Pieces Together:



1. Place the horizonal piece on top of the vertical piece.and check the fit around the book.
2. If the fit is snug, then remove the book and carefully take the paper strip off the double sided tape. Press parts together.
3. Type author/title label for spine of wrapper. Place the label on last spine flap. Call number label is attached 1" from the bottom.
4. Open wrapper and put "Note to the Reader" inside on the left flap.





∴ NOTE TO THE READER ∴

THIS BOOK IS VERY FRAGILE.

HANDLE IT WITH CARE.

PLEASE RETURN IT
TO THIS PROTECTIVE ENCLOSURE.

THANK YOU FOR YOUR COOPERATION.

University of Cincinnati, 1992

BOOK WRAPPER AND PAMPHLET CASE

The wrapper is for enclosures of 'medium' size, 1/2" to 2" in thickness. The pamphlet case is for material under 1/2" in thickness. As indicated below, a lighter weight material is used for the pamphlet case, which is essentially thin wrapper mounted inside of a pamphlet binder.

Materials:

.20 Hollinger acid-free folder stock **(wrappers)**
.10 Hollinger acid-free folder stock **(pamphlet cases)**
1/2" #415 3M acrylic double-sided tape

Construction:

1. Measure height, width, and thickness of item.

2. Cut 2 strips of Hollinger stock, one vertical and one horizontal (see diagram).

3. Mark measurements on both strips with a pencil and pre-crease with a folder and large triangle.

4. Using the #415 tape, attach the vertical strip on top of the horizontal strip, making sure that the creases line up properly.

5. To make the tab, find the center of flap #4 and make a mark 1 1/2" on either side of center (to form 3" tab). From these two points make two more marks 2" in toward the center. Make two more marks 1" further in at the edges of the flap. with a straightedge and scalpel, cut to connect the marks (see diagram).

6. To make a slot for the tab, insert the item and close the flaps in order. Make two marks on flap #3 at the base of the tab. Unfold the wrapper and cut the slot by connecting the marks. With the .20 stock, make two incisions (about 1/16" apart) to make a wider slot.

7. Round all corners with a corner rounder or a scissors.

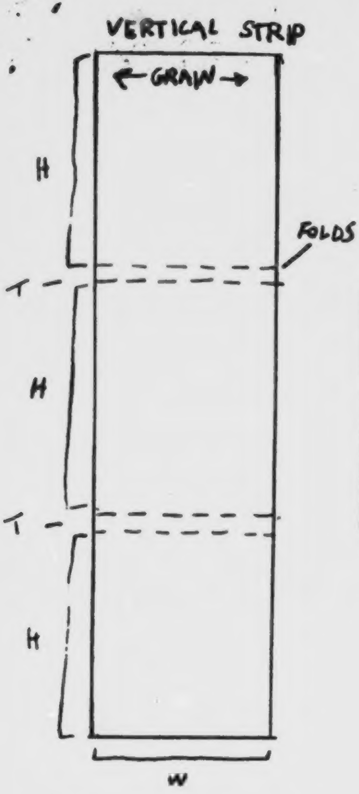
Pamphlet case - - - -

8. After wrapper is made, center and attach to the back board of a pamphlet binder with #415 tape.

sk-92
N.U.Library

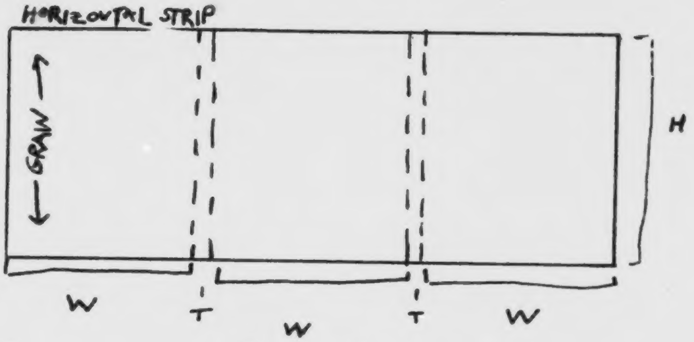
①

Northwestern


VERTICAL STRIP
← GRAIN →
H
FOLDS
T
H
T
H
W

3H + 2T = LENGTH

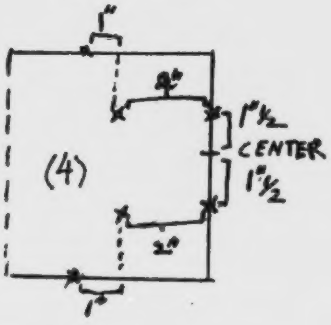
W = WIDTH OF ITEM


HORIZONTAL STRIP
← GRAIN →
H
W
T
W
T
W

3W + 2T = LENGTH

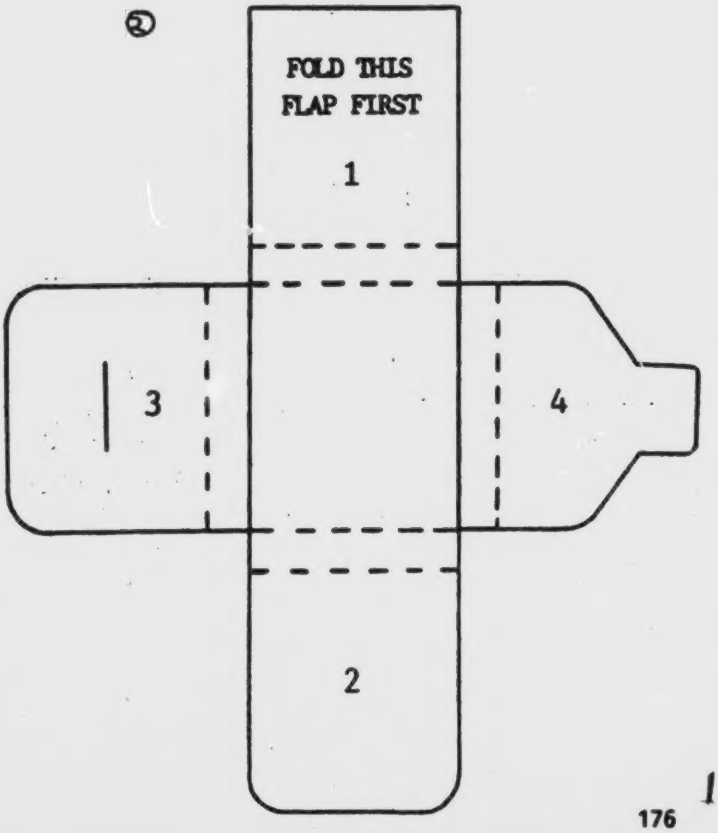
H = HEIGHT OF ITEM

TAB ③


1"
2"
1"½
CENTER
1"½
(4)
2"
1"

CONNECT X'S AND CUT

②


FOLD THIS FLAP FIRST
1
3
4
2

PHASE BOX CONSTRUCTION

Tools:

Paper cutter
Corner rounder
Stapler
Creaser

Materials:

Acid-free buffered phase box board (.060)
Adhesive backed velcro
One inch strips of double laminated bookcloth
PVA

Construction:

1. Carefully measure the height, width and thickness of the material.

2. Cut the horizontal and vertical strips according to the measurements, using the formulae on the attached sheet.

3. Mark with a pencil the exact positions for creasing as indicated.

4. Form all creases with the creaser.

5. Round the four corners indicated with the corner rounder.

6. Attach two or more cloth strips to the middle panel of the vertical strip with PVA as indicated.

7. Attach the two strips together with PVA and press with weights for at least 30 minutes.

8. Trim the cloth strips to extend slightly less than the thickness measurement and attach mated pairs of velcro patches to the strips.

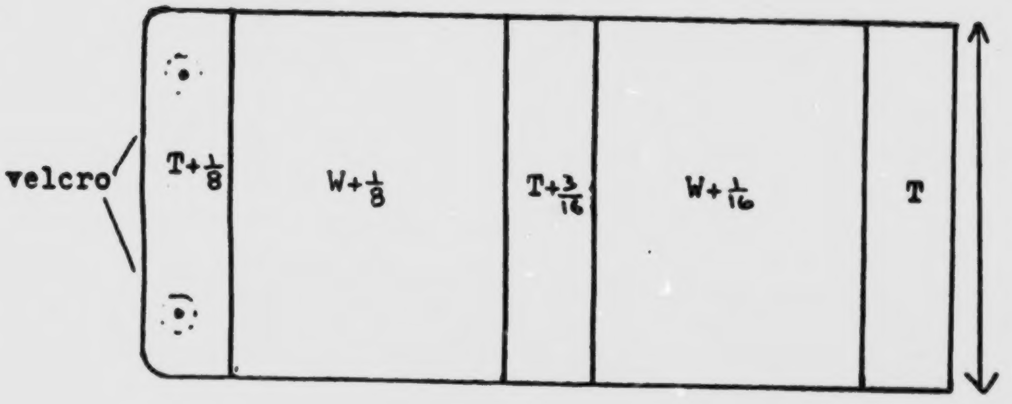
9. Form the enclosure to its final shape and transfer the opposite velcro patch to the adjacent flap. Secure all velcro with staples (hammer flat so they don't interfere).

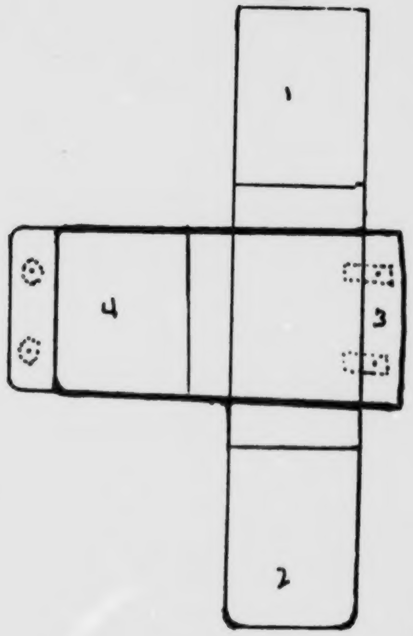
sk-92
N.U.Library

PHASE BOX CONSTRUCTION-2 boards

Northwestern

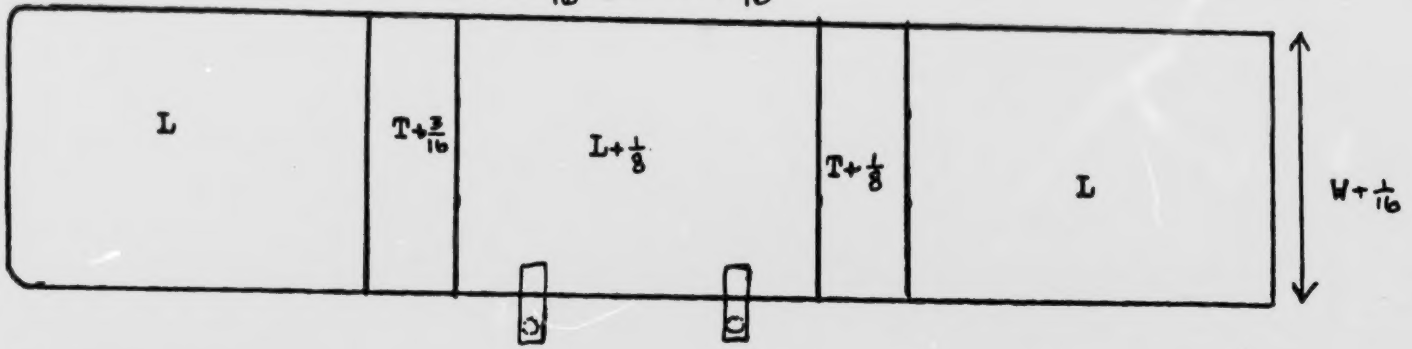
HORIZONTAL STRIP $3Th + 2W + \frac{1}{2}" \times H$


velcro
$T+\frac{1}{8}$
$W+\frac{1}{8}$
$T+\frac{3}{16}$
$W+\frac{1}{16}$
T
L



VERTICAL STRIP

$3L + 2Th + \frac{7}{16} \times W + \frac{1}{16}$


L
$T+\frac{3}{16}$
$L+\frac{1}{8}$
$T+\frac{1}{8}$
L
$W+\frac{1}{16}$

193

W= Width of book
T= Thickness of book
L= Leng:th of book

194

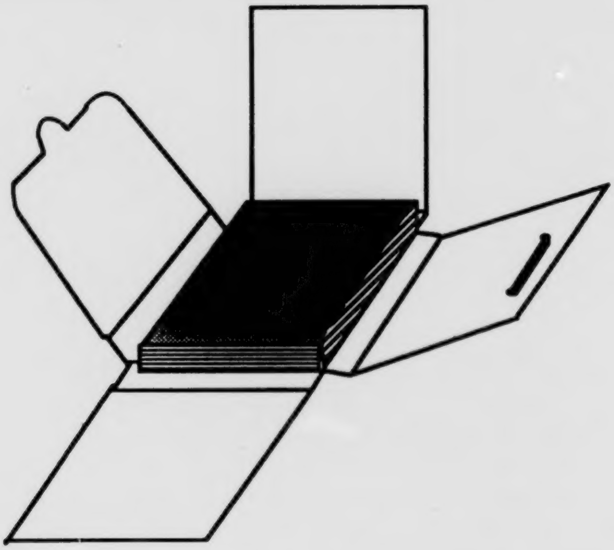
(all measurements taken at widest point)

WRAPPER

Candidates:

Intended to provide physical protection and some support to items of moderate weight and thickness housed in special collections.

Time to complete protective enclosure = 30 minutes.



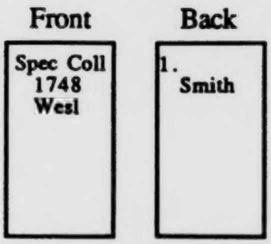
Materials:

- conservation board (Archivart 2 ply - ash gray)
- adhesive: 2:1 mixture of PVA & paste
- self-healing cutting mat
- pencil
- 1/16" diameter punch
- bone folder
- scrap paper
- polyester web
- board shear or cutter
- brush
- scalpel
- ruler (millimeter)
- triangle
- corner rounder (1/4 inch radius)
- weights

Procedure:

Note: In pencil, lightly write a batch number on the back of the call slip. This number will appear on all materials associated with a particular item.

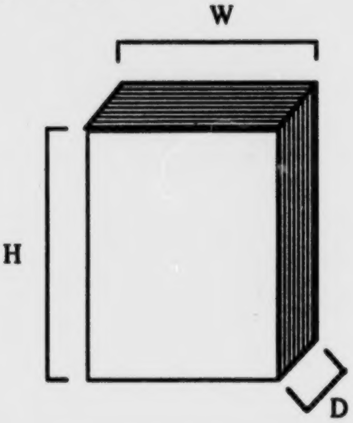
CALL SLIP



WRAPPER PROCEDURE
Emory Conservation Department

1. Using a triangle and a ruler, measure the item's dimensions, always remembering to take the **largest exact** dimension. Indicate dimensions and batch number for each item on form.

(H)	height
(W)	width
(D)	depth



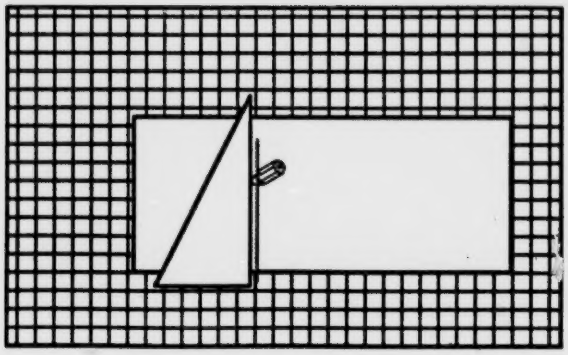
2. A spread sheet helps facilitate the calculation of all measurements once the item's dimensions have been entered. The spread sheet is based on these formulas:

   vertical strip (v): 2(depth) + 2.5(height) + 4 millimeters

   horizontal strip (z): 2(depth) + 3(width) + 6 millimeters.

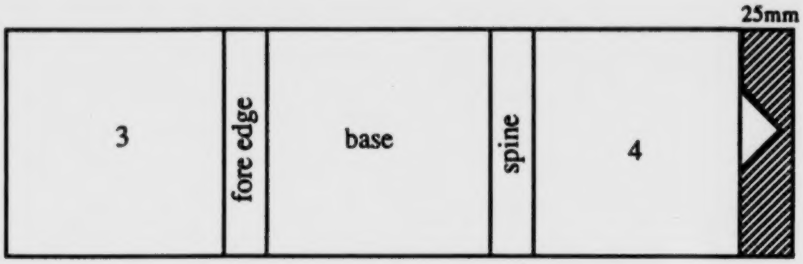
3. Procure two pieces of conservation board to accomodate the dimensions of vertical (v) and horizontal (z) strips. All creases will be made parallel to the grain. Label each strip on the inside bottom left hand corner with an identifying batch number.

4. Moving from left to right, mark dimensions lightly in pencil on vertical and horizontal strip to indicate where folds will be scored. Using a ruler and bone folder, score lines for folds on the vertical strip. A triangle and the squares on a self-healing mat may be used to achieve proper alignment for scoring straight lines.



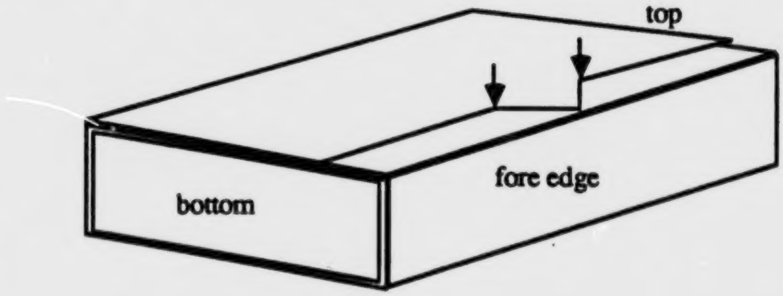
5. At score lines, gently and carefully enhance fold by bringing board up against straight edge and smoothing with bone folder. After creasing all vertical folds, position vertical strip around book to ascertain proper fit. Once you are sure the vertical strip fits properly around the item, mark and make creases for the horizontal strip.

6. Next, cut tabs for closure. Lay the horizontal strip down so that the outside of the strip is facing you. On the outer right flap, draw a line approximately 25mm from the outer edge of the flap. Using the grid on the self-healing mat, center this 25mm piece so that a triangle Δ may be drawn in its center. A triangle maybe be used as a template. Cut away all excess board, using a ruler and a scalpel, so that only the Δ remains.



7. Round all corners of the horizontal and vertical strips, including the tip of the trianglular tab using a 1/4" corner rounder.

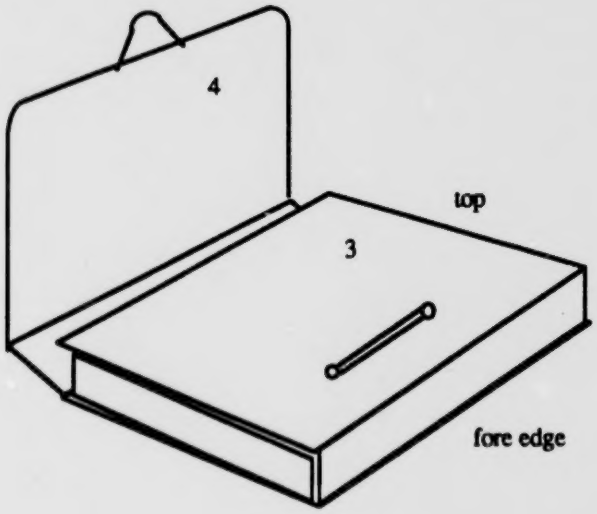
8. Fit and close the wrapper around the book and mark the points on the outer right flap that meets the base of the Δ. These marks will indicate the placement of the slot for the triangular tab closure.



9. Remove the item from within the strips and place on "in progress" shelf.

10. Place a piece of scrap board under the the horizontal strip where the slot will be placed. Using a small punch approximately 2mm (1/16") in diameter, create holes at each end of the closure line. Cut the slot by making 2 parallel lines approximately 1mm from each other within the diameter of the punch holes.

11. Place the item in the wrapper again to check for proper fit and closure. The item should fit snugly enough so that no movement occurs within the wrapper, yet not too tight to strain the item or make closure difficult.



12. Remove the item from the wrapper and again place it on "in progress" shelf. Adhere vertical and horizontal pieces together by gluing out the outer side of the center portion of the vertical strip. Scrap paper may be used to protect areas of board which will not receive adhesive. Position the glued out area onto the center portion of the horizontal strip. Bone down well.

13. Place polyester web above and below wrapper, weight, and allow to dry flat.

14. Erase all pencil marks, such as identification numbers, on boards before item is placed in wrapper.

198

Emory Conservation Unit revised 4-20-92

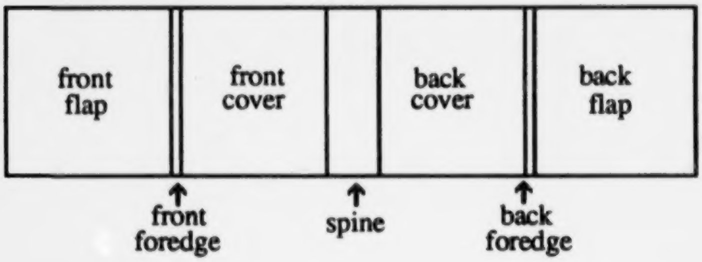
POLYESTER BOOK JACKET

Materials:

Bone folder	Ruler
Dividers/calipers	Scalpel/Blade
Polyester film (3 mil)	Self-healing cutting mat

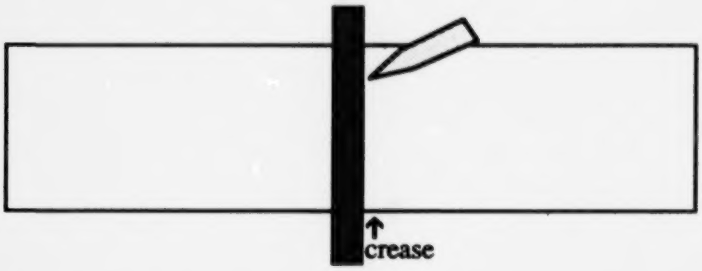
Procedure:

1. Measure height and width of book:
   Height : height + 1/16"
   Width: 4(width) + spine + extra

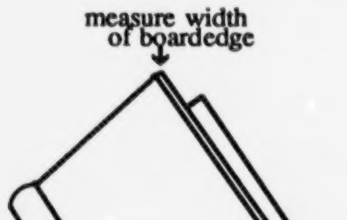

front flap
front cover
back cover
back flap
front foredge
spine
back foredge

2. Cut and square polyester strip.

3. Make spine crease near the midpoint on polyester strip by scoring and folding with ruler and bone folder. Resulting crease will be for front shoulder of spine.

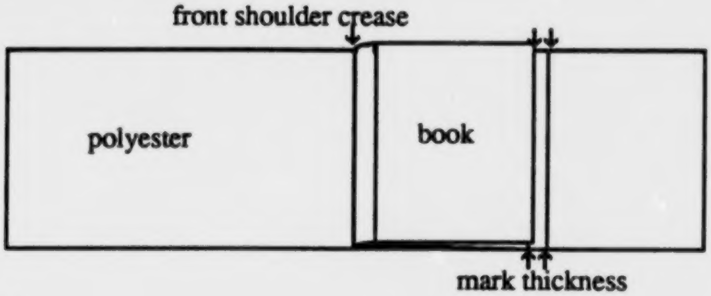


4. Measure board thickness of front board with dividers or calipers (measure at thickest point, usually corners).


measure width of boardedge

5. Place book face down on polyester strip positioning crease at front shoulder (shoulder is the point at which spine begins.)

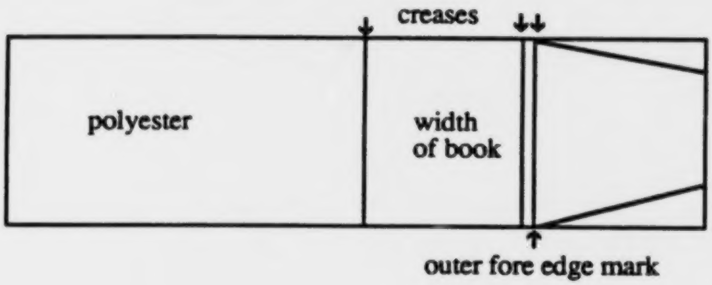
6. Make marks on top and bottom of polyester at book's fore edge with a sharp pencil or by lightly scratching polyester with dividers.



7. Make additional marks at head and tail to indicate board thickness (as measured with dividers) outward from fore edge mark.

8. Cut polyester about 1/2" less than book width from outer fore edge mark to edge of polyester to create inner flap.

9. Bevel edges from outer fore edge mark to inner flap edge (do not cut past outer edge crease mark).



10. Score outer crease, then inner (it is important to do in this order). Emphasize creases with fingers. For very thin edges, make two creases close to one another.

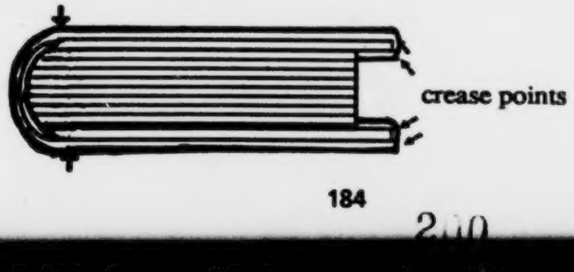
11. Fit jacket to book, taking care to align creases with shoulder and fore edge.

12. Mark or scratch polyester to mark back shoulder crease. Make crease.

13. Measure board thickness of back board with dividers.

14. Position back board on polyester at back shoulder crease and make marks on top and bottom of polyester at book's fore edge.

15. Repeat steps 7-11 for back boards of book.



Emory Conservation Unit revised 10-2-91

PHASE BOX

Candidates:

- Damaged or deteriorated book that will suffer further mechanical damage if left unprotected; or a book with a loose or detached cover, loose or detached leaves, or brittle paper.
- Infrequently used item in disrepair.
- Group of unbound materials, such as retrospective issues of a periodical, or a group of plates, which need protection but are unsuitable for binding.
- A book with a damaged binding that does not warrant the expense of a double-tray box or full conservation treatment.
- A damaged book for which repair or rebinding is not feasible, and which is too large or too heavy for a wrapper.

Cost:

Batch production at approximately 30 minutes per box. Materials cost approximately $1.00 per box.

Materials:

board shear
crimping machine
box measuring device
corner rounder
rivet fastening machine
stamping machine
ruler
triangle
awl

box board: alkaline, lignin-free, .060
PVA adhesive diluted 3:1 water
waxed linen thread
polyethylene washers
rivets, two part, 1/8 inch
stamping foil, black
Magic Rub eraser
Rubber stamps ("this flap first","flap 2", "flap 3")

Procedure:

1. Work in batches of 5 volumes. Measure and record the length (L), width (W), and thickness or depth (D) of the item using either the box measuring device or a triangle and ruler.

2. At the board shear, cut horizontal and vertical strips of board. The grain direction of the board should run parallel with the **short** dimension of the strip.

   - The width of the **horizontal** strip (Hw) is equal to the length (L) of the item plus 2 board thicknesses (approx. 3 mm). The length of the strip (Hl) is equal to three times the depth (D) of the item plus three times the width (W) plus 31 mm.

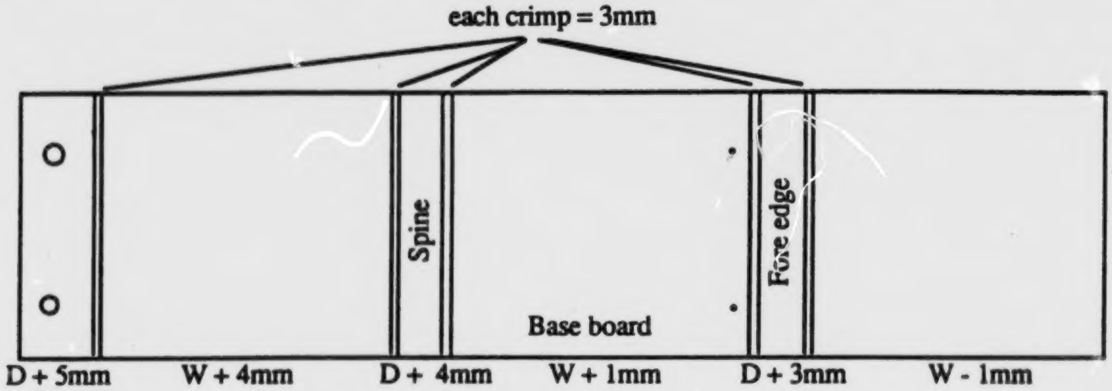
     $Hw = L + 3\text{mm}$ $Hl = 3(D) + 3(W) + 31\text{ mm}$

   - The width of the **vertical** strip (Vw) equals the width of the item. The length of the strip (Vl) equals two and a half times the length (L) of the item plus two times the depth (D) plus 12 mm.

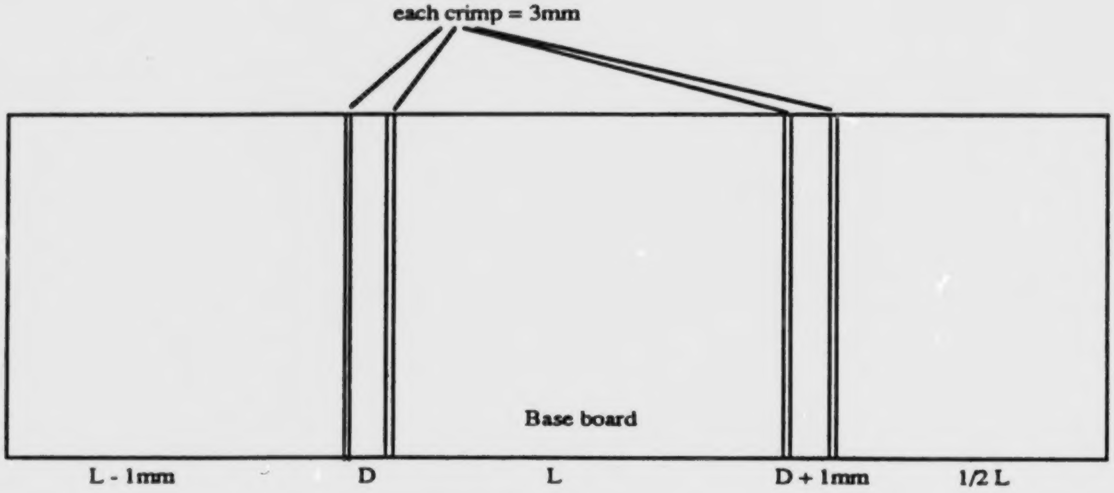
     $Vw = W$ $Vl = 2.5(L) + 2(D) + 12\text{ mm}$

3. Set up stamping press for the first title.

4. Check each side of the strips for flaws; marks for the crimps will be on the inside of the completed box. Along one side of each strip, measure and mark for crimps, adding and subtracting from the recorded dimensions, or using the computer calculated figures.


each crimp = 3mm
Spine
Fore edge
Base board
D + 5mm
W + 4mm
D + 4mm
W + 1mm
D + 3mm
W - 1mm

HORIZONTAL STRIP


each crimp = 3mm
Base board
L - 1mm
D
L
D + 1mm
1/2 L

VERTICAL STRIP

5. Round all of the corners of the strips on the corner rounder.

6. Center the crimp marks under the blade of the crimper and crimp the strips to allow folding of the board.

7. Stamp the outside of the spine area of the **horizontal** strip. Follow the guidelines given in the Procedures manual, using black foil.

8. Erase the pencil marks from the strips with a Magic Rub eraser.

9. Mark the position of holes for ties on the fore edge side of the baseboard of the horizontal strip. Holes should be approximately 1.5 cm from edge on most books (larger and/or thicker books require the holes to be further from edge). Punch holes for ties with an awl.

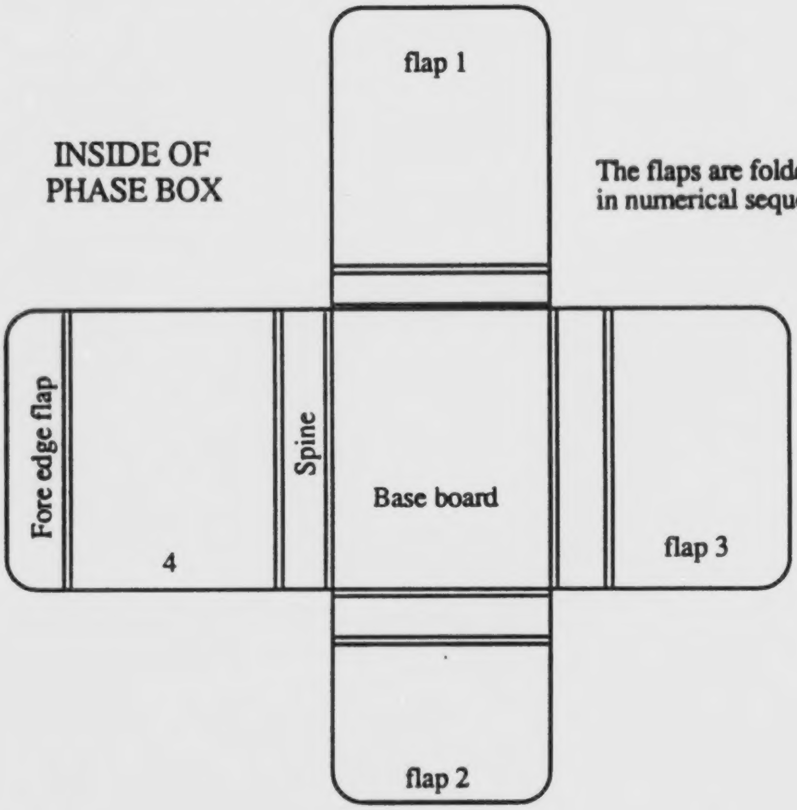
10. String thread through the holes from the inside out, leaving 10 cm (4 inch) lengths outside either hole to allow for wrapping around the polyethylene washers. Pull the thread taut on the inside and smooth with a bone folder. Knot the ends of the thread to prevent unraveling.

11. Mark the placement of washers by centering washer on fore-edge flap for most books (larger and/or thicker books could have washer placement slightly off-center closer to the string-edge). Also mark holes lightly (1/8 inch) to the inside of the string when it is pulled up over the fore-edge of the box. Punch holes through the marks with an awl.

12. Using the rivet-setting machine, attach the washer to the fore-edge flap.

13. Apply glue to the outside of the baseboard of the vertical strip and position accurately on the inside of the baseboard of the horizontal strip.

INSIDE OF
PHASE BOX



The flaps are folded
in numerical sequence.

14. Weight the glued area until dry.

15. Attach or stamp a "fold this flap first" label to the outnside of flap 1. If desired, the flaps may be numbered to assist the user in closing the box.

16. Close the phase box and secure it by winding the thread around the washers.

6

Pamphlet Binding

Thin, light weight pamphlets need support to be shelved along with larger volumes, yet are typically too small for library binding. The definition of a pamphlet varies among institutions, and may be defined for example, as all single section publications or by thickness, such as single section, multiple-section, or unbound publications thinner than 1/2" or 1/4". Pamphlets may be sewn with thread or with wire staples, depending on the condition of the paper. A variety of commercial and house-made pamphlet binding styles have been developed to enable shelving of pamphlets, as the following examples demonstrate. If many pamphlets are to be bound then a batch process should be established, whether in-house or at a library bindery, to save time and expense.

Pamphlet Binding

Sew-In Pamphlets: Single Signature, Multiple Signature & Side Sewn - Michigan

Sewing Pamphlets Into Pamphlet Binders - Berkeley

Pamphlet Binding - MIT

Pamphlet Binding- Stitched Pamphlets - Florida

Custom Pamphlets - Ohio University

Single Signature Pamphlets - Cincinnati

Staple Binding - Northwestern

Pamphlet Binding - Northwestern

Michigan

✓ SEW-IN PAMPHLET - SINGLE SIGNATURE

Basic technique: Greenfield pages 113-118

Variations:

- In most cases, we use 60 pt. board.
- We round the corners of the covers.

✓ SEW-IN PAMPHLET - MULTIPLE SIGNATURES

Basic technique: Greenfield pages 118-123

Variations:

- In most cases, we use 60 pt. board.
- We round the corners of the covers.

✓ SEW-IN PAMPHLET - SIDE-SEWN

Basic technique: Kyle pages 127-132

Variations:

- We measure the cloth spine piece differently.
- We sometimes incorporate a bristol spine strip.
- In most cases, we use 60 pt. board.
- We round the corners of the covers.

BEST COPY AVAILABLE

Berkeley

SEWING PAMPHLETS INTO PAMPHLET BINDERS

Pamphlets are defined as books that are 3/8" or thinner in the spine. Old or already bound pamphlets that are too damaged to be bound as-is by the Bindery may be repaired partially or fully in-house. New pamphlets needing binding are sent directly to the Bindery.

There are several possible treatments for pamphlets or small books whose bindings are damaged. In each of these the existing binding must first be removed.

A) Repair done in-house & pamphlet sent to Bindery for new pam binding (designated as "PB").

B) Repair & new pamphlet binding done in-house (designated as "sew in"). Reasons for hand sewing include:

- it is too fragile to be wire-stitched at the Bindery but will withstand hand sewing. (If too brittle to be sewn in by hand must be replaced.)
- the shoulders are too pronounced to be stitched by the Bindery. If they are too pronounced even to sew in by hand send it for a new case.
- the gutter is too narrow for side stitching and the pamphlet has 5 or 6 sections (so it can't be stitched by the Bindery.) Pamphlets with more than 6 sections usually will not be appropriate for pambinding.

C) Pamphlet binding with a pocket ("pb pocket"). Tyvek envelopes are stitched into the pam binder to hold items that cannot be bound in. Pamphlet bind pockets should be done by the Bindery unless there is a part that needs hand sewing through the fold.

PROCEDURE:

REMOVAL OF OLD PAMPHLET BINDER

1. Cut off old pam binder. If necessary remove any adhesive strips dry, or use a small amount of moisture to release water-soluble adhesive. If damage will occur, leave old cambric in place.

Berkeley

2. Recopy call number onto pamphlet if it isn't on verso of title page.

3. Remove staples with staple remover tool only if:

   a. they are more than 1/4" from the spine
   b. there are more than 3 or 4 (just remove the extras)
   c. removal will not damage the pamphlet

   Always leave a couple to hold the pamphlet together. Leave on any super in good condition that is not causing damage to the text.

4. Route pamphlet to next step, either PB at Bindery, Pam Pocket at Bindery, or PB sew-in in-house (A., B., or C. below.)

A. "PB"s TO BE BOUND AT BINDERY

1. Remove old, damaged pamphlet binder as instructed above.

2. Do any paper repair or photocopying needed.

3. Return item to Binding Preparation to be sent to Bindery.

B. "SEW IN" NEW PAM BINDER IN-HOUSE

1. Remove old, damaged pamphlet binder as instructed above.

2. Do any paper repair needed.

3. Choose new pamphlet binder ("pb"):

   * Use the smallest size pb that will cover the pamphlet.
   * Head and tail squares should be less than 1/2". Trim those that are greater, and round the corners.
   * Position music scores no more than 1/4" from tail.
   * The spine thickness should be chosen based on the total thickness of the pamphlet--

Berkeley

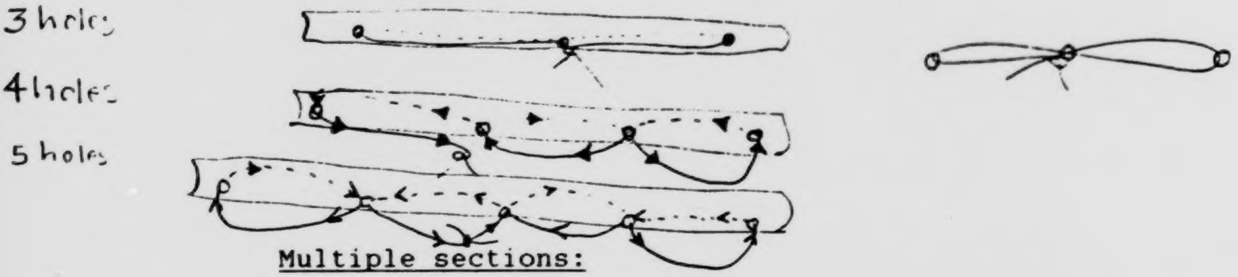
"0" for single section pamphlets
"1/4" for multiple section pamphlets up to 1/4"
"3/8" for multi-section pamphlets between 1/4" and 3/8"

4. Sew pamphlet into binder as follows:

Single folio pamphlet:

a. Place pamphlet snugly into spine of binder.
b. Punch 3 or more sewing holes through pamphlet and binder, according to the height of the pamphlet. Place sewing holes no more than 1/2" from head and tail of pamphlet.
c. Use "butterfly" sewing pattern, placing knot on the outside of the binder.
d. Seal the adhesive spine strip and rub down well.

butterfly sewing pattern:

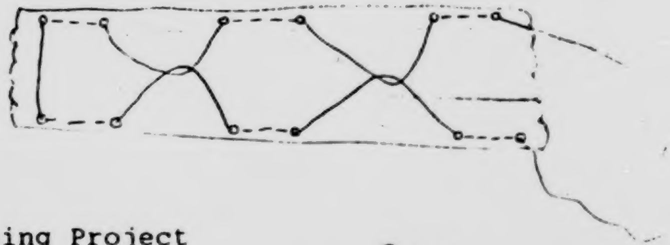


Multiple sections:

i. Consolidate the spine if needed with PVA.
a. Punch 6 sewing holes in the first and last sections.
b. Sew through each section from the bottom to the top, linking stitches as in a prep. It may sometimes be helpful to sew through additional sections.
c. Seal the adhesive spine and rub down well.

It may sometimes help to sew through a free guard when the paper is fragile.

multiple section sewing pattern:



MT

PAMPHLET BINDING

for paper-bound single signature folded stapled pamphlet material, less than 1/2" thick, i.e. music scores

Select a pre-made pamphlet folder of proper size (no less than 1/4" overhang on head, tail, and foreedge). Cut down to fit if necessary.

Remove staples from item.

Cut sheet of paper to height of item, and fold around it to make a wrapper.

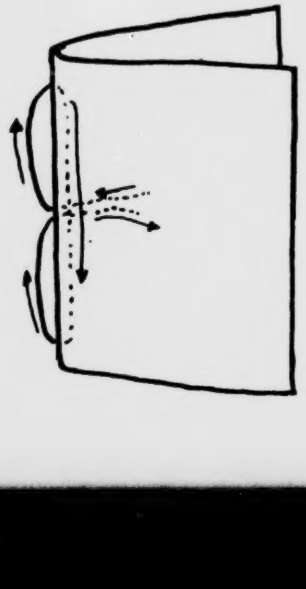
Sew wrapper and item into cloth spine of folder, using original staple holes if possible. Use an awl to punch new holes if needed.

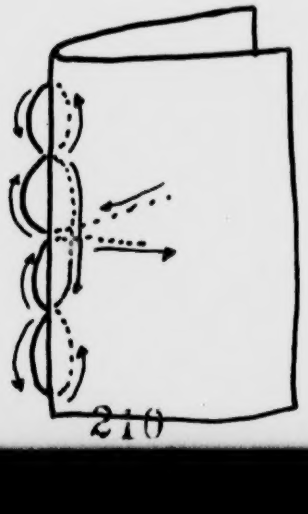
> Hole placement: One hole at the center, one each 1" from head and tail. Holes should be from 2-4" apart. There will usually be 3-5 sewing holes needed, but if the item is particularly large, more holes will have to be punched.

Begin sewing on the inside of item at the center hole, following the diagram below. Use number 12 or 18 thread, waxed, twice the length of item. Sewing should be tight, and tied off inside with a square knot. (Square knot: pass right thread over left, tighten; pass left thread over right, tighten.)

Glue cloth strips of pamphlet folder to wrapper with PVA or methyl cellulose.

Trim foreedge of wrapper paper to size with straightedge.





MIT

To make custom pamphlet folder

Cut:
- two .4 cover boards that are 1/2" longer and 1/4" wider than item
- cloth strip that is approx. 3" wide by board length plus 2"
- between boards measurement that is thickness of item plus 1/4"

Assemble with PVA.

Sew item and wrapper onto a 3" strip of cloth in same manner as above.

Glue into pamphlet folder using PVA. (Sewing will not show on outside of pamphlet spine.)

UNIV of Florida

CONSERVATION UNIT
PAMPHLET BINDING PROCEDURES
STITCHED PAMPHLETS. STAPLED. 7/17/90

These procedures outline the construction of in-house pamphlet binders for loose sheets under 5 mm in depth, or less than fifty sheets.

1.0 DEFINITIONS.

(1.1) Height refers to the dimension of the item parallel to the spine. **(1.2)** Width refers to the dimension of the item perpendicular to the spine. **(1.3)** Depth refers to the thickness of the item across the spine.

2.0 TRIMMING MATERIALS.

(2.1) Select two boards at least 1 cm larger than the item in height and width. **(2.2)** Trim the boards as follows: **(2.2a)** height of the item plus 2 cm, **(2.2b)** width of the item. **(2.3)** Trim a 1 cm strip off the long side of each board. Save these strips. **(2.4)** Select two strips of the same color cloth and cut the height of the boards. **(2.5)** Cut a 1 cm strip off the long side of each cloth strip.

3.0 TEXT BLOCK PREPARATION.

(3.1) Check quickly for the proper collation and add endsheets if needed. See policy #------ on endsheets. **(3.2)** If endsheets are attached, staple them on at this point with one staple in the center.

4.0 CASE CONSTRUCTION.

(4.1) Take the two pieces of cloth and fold lengthwise with the cover surface of the cloth to the outside. **(4.2)** Glue up the inside of one of the larger cloth strips and place the thin board strip up against the center fold. Place the larger board one half cm away from the strip and bone to set. **(4.3)** Install security strip under the cloth along the 1 cm strip. **(4.4)** Fold the other half of the cloth over and bone overall. **(4.5)** Set the hinge area. **(4.6)** repeat process for second board.

5.0 CASING.

(5.1) The block and the covers are now stapled through the side along the 1 cm strip. For a 30cm pamphlet, use four staples, alternating the side which they are driven into. **(5.2)** Take the remaining 1 cm cloth strips, glue up, and place over the exposed staples. The cloth should be wide enough to cover the staples, but should not go into the joint of the pamphlet. **(5.3)** Press under light weight until dry to prevent warping.

7.0 END PROCESSING.

(7.1) Send to the Preparations and Processing Unit call numbers and discharging. (7.2) Update records and complete statistics as instructed in procedures----------..

Sample

University of Florida
Manual

CONSERVATION UNIT
PAMPHLET BINDING PROCEDURES
SEWN PAMPHLETS, SINGLE SIGNATURE. 7/17/90

These procedures outline the construction of in-house pamphlet binders for single signature items. For more detail refer to Conservation Treatment Procedures (C. Morrow. 2nd ed. 1986), pages 81 - 92.

1.0 DEFINITIONS.

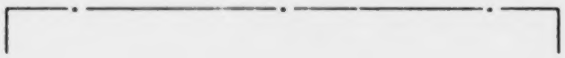
(1.1) Height refers to the dimension of the item parallel to the spine. **(1.2)** Width refers to the dimension of the item perpendicular to the spine. **(1.3)** Depth refers to the thickness of the item across the spine.

2.0 TRIMMING MATERIALS.

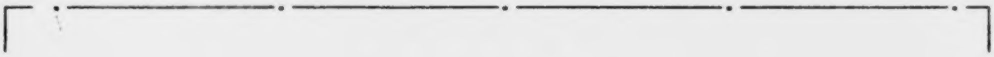
(2.1) Select two boards at least 1 cm larger than the item on all sides. **(2.2)** Trim the boards as follows: **(2.2a)** height of the item plus 2 cm., **(2.2b)** width of the item plus 1 cm. **(2.3)** Select two strips of the same color cloth and cut as follows: **(2.3a)** one 5cm higher than the boards, **(2.3b)** the other the same height as the boards.

3.0 TEXT BLOCK PREPARATION.

(3.1) Open pamphlet to the center fold. **(3.2)** Remove and discard staples. **(3.3)** Take the cloth strip the same height as the boards and fold in half lengthwise, with the outside surface of the cloth facing in. Place the cloth strip over the outside of the pamphlet fold. **(3.4)** Using three awls, pierce evenly spaced holes through the pamphlet and cloth strip. The holes should be about 4cm apart, and depending on the height of the pamphlet there should be three, five or seven holes.



Small pamphlet
less than 15 cm
in height.

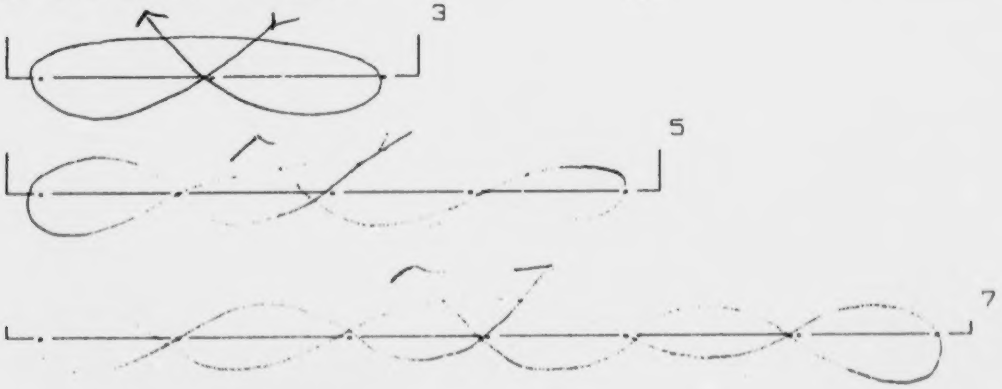


Large pamphlet.
15 cm and larger.

Florida

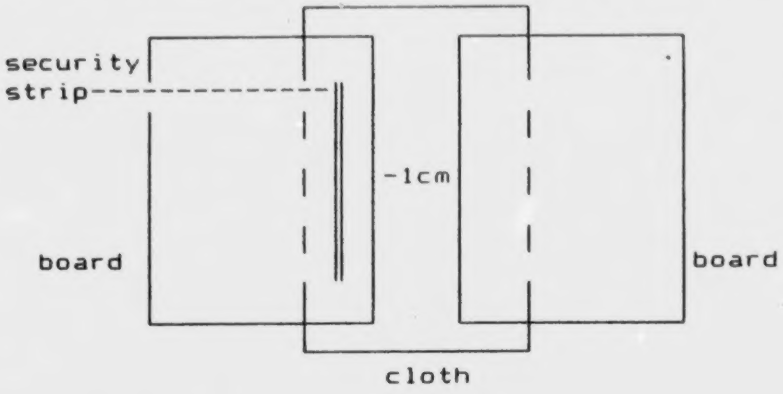
4.0 SEWING.

(4.1) Thread a needle with a piece of linen thread about twice the height of the pamphlet. (4.2) Remove the center awl. Starting from the outside, sew the pamphlet to the cloth strip in a figure eight pattern. Remove awls as necessary, and pull the thread tight in the direction of the sewing. (4.3) Tie a square knot on the outside of the cloth strip making sure the two ends are on opposite sides of the center thread.



5.0 CASE CONSTRUCTION.

(5.1) Take the second piece of cloth and fold it lengthwise with the cover surface of the cloth to the outside. Glue up the inside of the cloth strip and place the boards on the glued cloth leaving a minimum of 1 cm in the center between the boards. Leave a larger space if the pamphlet is over 1 cm thick. (5.2) Glue down the top and bottom turn ins and let dry. (5.3) Attach a security strip to one of the boards as diagramed below.



6.0 CASING.

(6.1) The sewn signature is now attached to the case. (6.2) With a waste sheet between the cloth and the pamphlet, glue one side of the cloth up, and position it in the case. Bone down, flip the pamphlet over and repeat for other side. (6.3) Set aside to dry under a light weight.

Florida

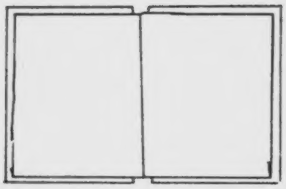
7.0 END PROCESSING.

(7.1) Send to the Preparations and Processing Unit for completion of call numbers and discharging. (7.2) Update records and complete statistics as instructed in procedures----------------.

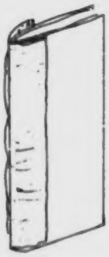
Ohio Univ

CUSTOM PAMPHLETS

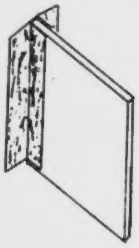
Create custom pamphlets for items too large for commercially made binders.



1. Cut two identical pieces of board which are 1/4 of an inch longer than the head and the foot of the pamphlet and the same width as the pamphlet or other material.



2. Sew the pamphlet, either through the side or through the center, onto a strip of buckram which is the length of the boards and four inches wide.



3. If the pamphlet was sewn through the side, cut two more pieces of four inch wide buckram the length of the boards.

4. Fold each extra piece of buckram in half with the right side of the material together and adhere one side of each fold to one side of the side-stitched cloth. Repeat for the other side.

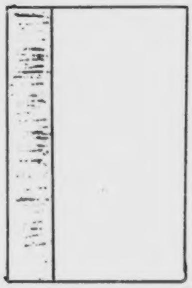
5. Adhere a board to the loose flap of folded cloth. Repeat for the other board.

6. Trim any straggling ends of cloth.

Ohio U

7. If the pamphlet was sewn through the center, remove any staples and then adhere one board to each loose flap of cloth. Be sure to allow approximately 1/4" between the spine of the pamphlet and the edge of the board.

8. To complete both pamphlet styles, cut a piece of buckram the length of the binder. Apply pva to the cloth and center it over the spine of the pamphlet. Rub firmly with a bone folder.



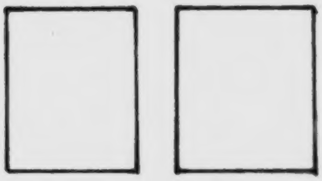
Cincinnati

SINGLE SIGNATURE PAMPHLETS

Adapted Jane Greenfield Method

You will need:

Two Lig-free Cover Boards

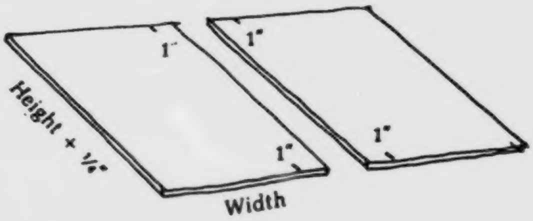


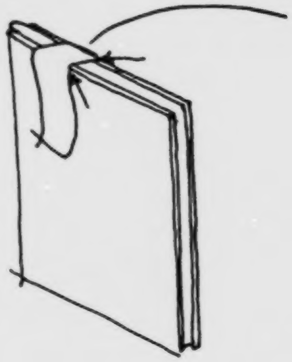
W x H + ¼"

Cloth Hinge for Cover

Cloth Hinge for Pamphlet

1. Lig-free boards are precut in three sizes - small, medium and large - for pamphlet binders. Select two pieces that are somewhat larger than the pamphlet. Cut the board the height of the pamphlet plus ¼" by the width of the pamphlet.
   Note: Pamphlets smaller then 4½" X 6" are put in 5" X 7" binders.
   Mark off 1" at the head and tail of each board as illustrated.



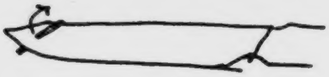


2. To determine the width of both cloth hinges (inner and outer), sandwich the pamphlet between the cover boards. Wrap a strip of paper around the unit and mark the outer edges of the boards on the paper. Add 2¼" to this measurement for the exact width of the cloth hinges.
   Example: If the pam/board unit is ½" and 2¼" is added, the width of each hinge is 2 3/4".
3. Cut one cloth strip the exact height of the pamphlet. Cut the other strip the height of the boards plus 1½".

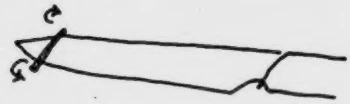
Cincinnati

Preparing the Pamphlet

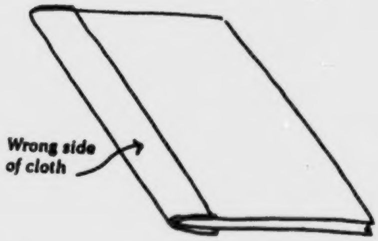
1. Open pamphlet to the center and remove the staples. Bend up the legs with a dull knife.



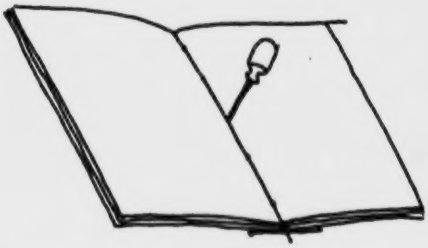
Turn pamphlet over and pry out the staple with a see-saw motion.



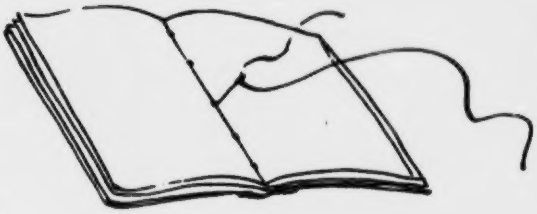
2. Fold cloth strip in half lengthwise and place around the fold of the pamphlet. Secure with plastic clips.
The textured side of the cloth is facing the pamphlet.

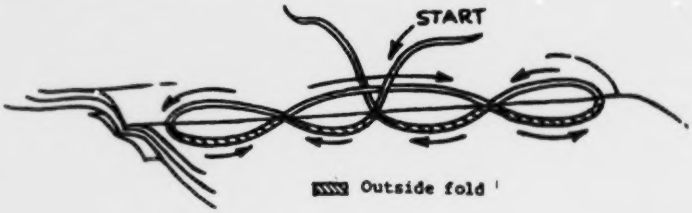


3. Open the pamphlet and stab 5 evenly spaced holes through the fold of the pamphlet and the cloth. Note: Taller pamphlets will need 7 holes.

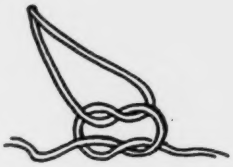


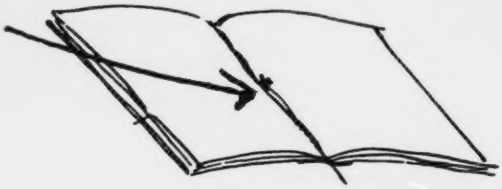
4. Start sewing inside the fold, leaving a tail of thread long enough to tie a square knot. Sew in the direction of the arrows, ending in the middle where you started.





5. Tie a square knot (left over right, right over left) around the long center stitch. Trim ends of thread to about ½".

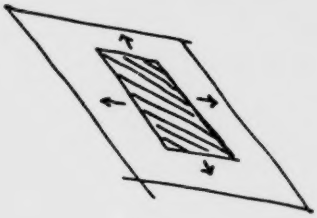




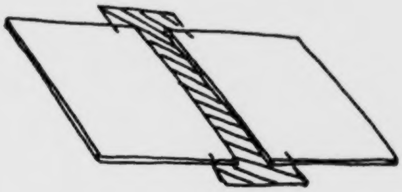
Cincinnati

Constructing the Pamphlet Cover

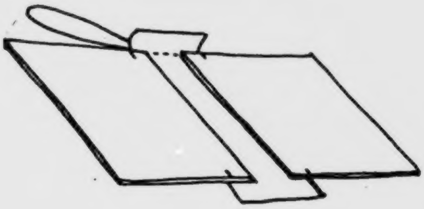
1. Place the cloth strip on waste sheet and apply PVA mixture to the cloth in the direction of the arrows.



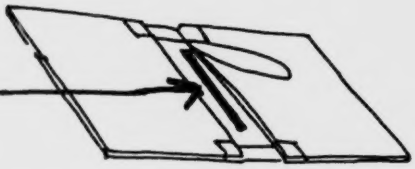
2. Throw away the waste sheet, and position the boards on the adhesived cloth, lining up the pencil marks with the edges of the cloth



3. Turn the cloth tightly around the boards, rubbing along the edge of the boards with a bone folder.

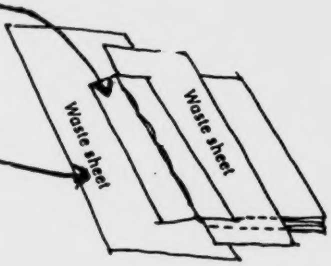


4. Work the cloth down between the boards with the bone folder. Put completed cover between wax paper and put under light weight.



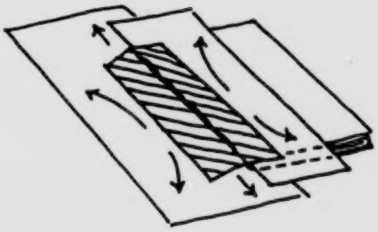
Place tattle tape on cloth part of spine for designated libraries.

5. Fold the sewn cloth hinge out flat. Put one waste sheet between it and the pamphlet and another under the extending portion.

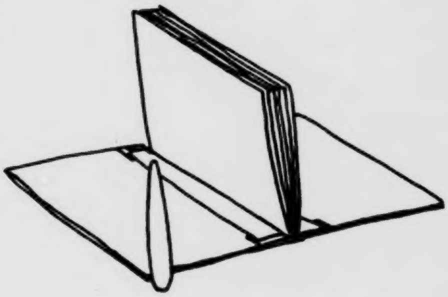


Cincinnati

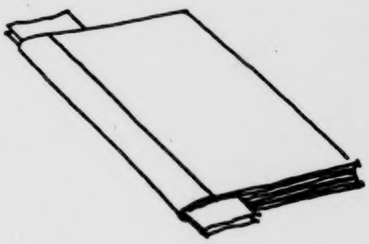
6. Paste in the direction of the arrows, pasting lightly over the sewing threads and very lightly and carefully at each end.



7. Center the fold of the pamphlet on the fold of the cover and rub down the cloth on each side with a bone folder.
Work the cloth down between the boards.



8. Put a strip of waxed paper on either side of the pamphlet, inside the boards and the cloth hinges you have just glued, to act as a moisture barrier.
Let the pamphlet dry overnight under a boards and a weight.



STAPLE BINDING

For material under 3/8" thick that is in single-sheet format. As this is a side-stapled binding it is appropriate only for non-artifactual material and requires an inner margin of at least 3/4".

Materials:

Premade binders (SEMCO: tyvek joint, .25 pressboard, 1/2" tabs)

Stainless steel staples

acid-free endsheets

Construction:

1. Remove the existing staples, if any.
2. Cut endsheets to size- one sheet front and back.
3. Select a standard size binder that is closest in size to the item and leaves at least a 1/4" square around all three sides.
4. Center item in covers.
5. Staple item three times, appropriately spaced, from the front side of the item.

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PAMPHLET BINDING

Materials:

Premade binders (SEMCO: tyvek joint (1/2") with acid-free .25 pressboard covers)

#16 linen or cotton thread
Acid-free single-fold endsheets (LBS)

Construction:

1. Remove staples.
2. Cut endsheet to the size of the pamphlet.
3. Select a standard size binder that is closest in size to the pamphlet and leaves at least a 1/4" square around all three sides.
4. Assemble materials by inserting the pamphlet into the endsheet and centering in the cover. Place the assembly, open to the fold of the pamphlet, into the sewing trough.
5. With the awl, punch three holes: one in the center and one 1/2" in from each end. LEAVE the awl in the last hole to retain the proper alignment of holes.
6. Sew the pamphlet by inserting the needle through the center inside hole. Then draw the needle through (from the outside) the hole at the end (without the awl). Remove the awl and pass the needle (from the inside) through this hole. Now draw the needle back through the center hole from the outside (see diagram). Tie off the two ends firmly, trapping the longstitch between them.

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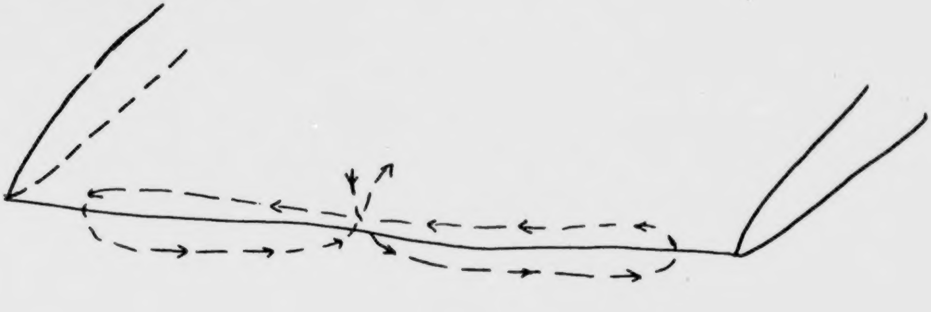

7

Reinforcement of Paperback Bindings

An increased, and increasing, proportion of new books purchased by libraries are paperbacks rather than case bound volumes. To reduce shelf processing costs many libraries choose to defer library binding new paperbacks, and may leave them in their original paper covers or may use one of the following methods to reinforce the volume. These techniques strengthen the paper cover itself by laminating a stiff layer to the inside or the outside of the cover, and/or they may reinforce the attachment of the paper cover to the first and last leaves of the text. The leaf attachment method is not improved, however, and may fail despite the treatment.

Library policy will dictate when or whether the volume will be library bound: either after a designated number of uses, or when the cover or leaf attachment fails. In some cases it may be deemed less expensive overall to replace the damaged volume with a new paperback copy.

Reinforcement of Paperback Bindings

- Reinforced Covers (Stiffens) - Northwestern
- Catalog Binding - Northwestern
- Stiffening Paperback Materials - Cincinnati
- Cover Reinforcement - Ohio University
- Cover Reattachment - Ohio University
- Stiffening of Paperback Materials - Cornell
- Pad Bind - Michigan
- Strengthening Spiral Bindings - Michigan

REINFORCED COVERS (STIFFENS)

Treatment only for medium to small soft-cover material **with sewn page attachment.**

Provides an excellent and economical alternative to commercial library prebinding for monographs in this format. Any volumes that begin to wear from extreme use can later be sent for a hard cover binding.

Materials:

Mulberry tissue
.25 acid-free pressboard
1/2" #415 3M tape

Construction:

1. Gently pull back both covers to the natural crease line and bone down to form a distinct opening fold.
2. Photocopy onto acid-free paper any information on the inside of the front and back covers. Trim to size and tip onto text block.
3. Reinforce opening fold of each cover by attaching a 1" strip of mulberry tissue with PVA. 1/4" of the strip should extend onto the text- 3/4" onto the cover. Allow to dry with covers open.
4. Cut two pieces of the pressboard exactly the height of the volume by the width of the opened cover minus 1/4".
5. Use the tape to form a border around all four edges of both pieces; remove backing.
6. Attach pieces to the inside covers (exactly flush to bottom edge).
7. From the outside, gently work in a groove at the inside edge of the pressboard with a bone folder. The opening fold and the groove will form a double joint to distribute the stress of opening (see illus.).
8. Nip the book in a press to firmly set the tape adhesion.

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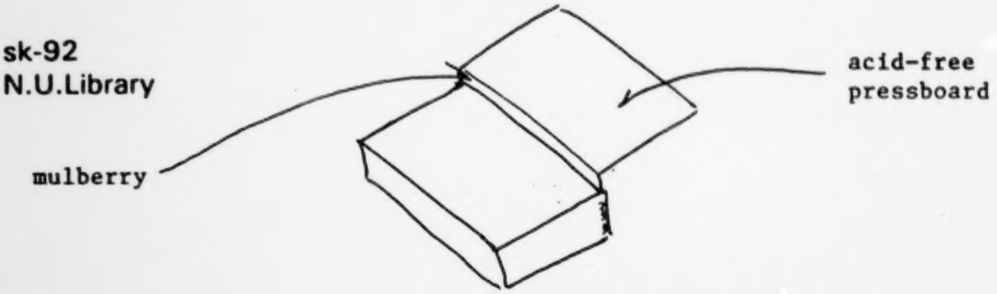

22:

CATALOG BINDING

For material that is adhesive-bound as one piece, and is of temporary value (telephone books, directories, etc.)

Materials:

Bookcloth
Acid-free .25 pressboard
hinge cloth, 1" strips

Construction:

1. Cut pressboard covers: height of item plus 1/4" by width. Round three corners of each.

2. If practical, remove title information from the item by attaching clear plastic tape to the spine and cutting out the information portion with a scalpel. Peel up the title. Remove the excess tape from the spine.

3. If glossy, sand over the spine lightly and onto the sides about 1/2".

4. With the rounded corners at the top edge and bottom foredge, position the boards onto the item so that the covers are flush to the bottom and extending past the foredge 1/4". Put it in a lying press with the spine facing up.

5. Cut cloth to exact height of item by the spine thickness plus 3". Glue up with PVA and center it onto the spine. Rub down securely, over the joint area and onto the boards.

6. While still in the press, remount the spine information by reattaching with PVA.

7. Remove from press and open the boards. Attach a strip of hinge cloth to reinforce the joints. Allow to dry under a board and a light weight.

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"STIFFENING" PAPERBACK MATERIALS

As a general rule, paperbacks are sent to the commercial binder for mylar binding. Two exceptions are paperbacks added to the collection RUSH and temporary Reference paperbacks, e.g. Readers Guide Index, Education Index, Business Periodical Index, that are superseded at a later date. Both methods are the same except for the method of attaching the board to the inside of the covers.

Materials needed: Hinge cloth - Tyvek or Linen
40 pt. library board or another acid-free board
PVA/Methyl Cellulose mixture or
Double-sided tape

1. Cut two strips of hinge cloth the height of the paperback. Also cut two pieces of 20 pt board the height of the paperback by the width minus ¼" (H X W-¼")

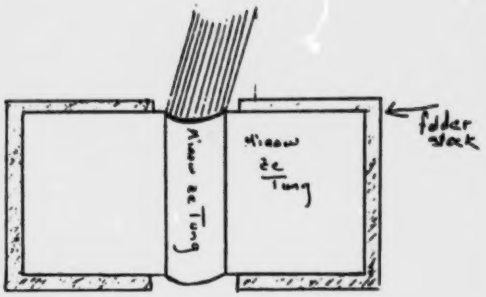
2. Open cover. Fold the hinge in half lengthwise. Apply mixture to the underside of one of the strips and lay it down with the crease aligned to the joining of cover and bookblock. Bone down and let it partially dry. Close cover and bone down from the outside.

3. Attaching the library board to the underside of the cover:
    a. Method 1 - apply mixture to one side of the library board and attach it to the inside of the cover. It will cover part of the hinge. Place wax paper between cover and text, bone down. Turn book over and repeat steps 1 and 2. Place book under a weight to dry.
    b. Method 2 - Place double-sided tape on the four edges of the board. Match board to inside of cover. Carefully lift one edge at a time and remove the backing from the tape. Nip in the press for good connection.

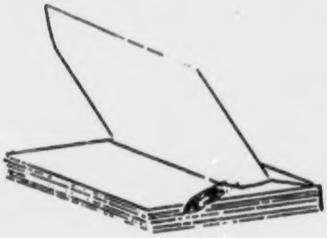
Ohio Univ

COVER REINFORCEMENT

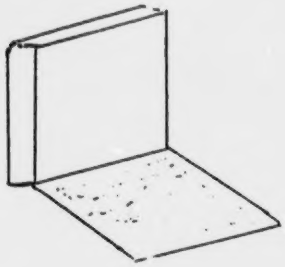
NOTE: Before reinforcing any covers, check to see if there is any print on the insides of the covers. If there is print, please see Susan for further instructions. Most of the time these instructions will be to photocopy the printed material and adhere the photocopies to the reinforced boards.



1. Select or cut two pieces of medium weight folder stock which extend 1/2 inch beyond the head, tail, and fore edge of the volume. Be sure that the grain of the folder stock is parallel with the spine of the material. Flex the folder stock gently lengthwise and then widthwise. The grain is parallel to the dimension which flexes easier.



2. Check to see that the cover hinges at the spine. If the cover is partially adhered to the text and hinges forward of the spine, carefully slip a blunt knife or thin bone folder between the cover and the text and separate the cover from the shoulder area of the text.



3. Apply a medium coat of adhesive to the covers.

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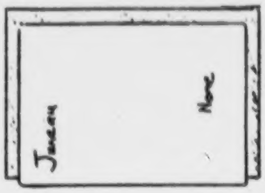
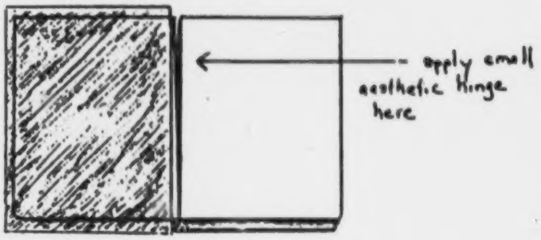


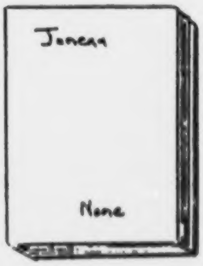
4. Carefully position the folder stock so the spine edge of the board is 1/4 inch from the spine. This gap allows for the thickness of the board and allows the board to pivot at the hinge.



5. If the cover is torn away from the spine, adhere an aesthetic hinge to the inside hinge area. (Aesthetic hinges are strips of mending tissue adhered to the joint area. These strips extend only to the shoulder and not beyond. Refer to the AESTHETIC HINGE notes for complete instructions.) Be sure that the board is properly aligned with the text before adhering the hinge to the board.

6. Place waxed paper between text and reinforced boards and place under pressing boards to dry.

7. When the book is dry, trim off the excess folder stock flush with the edges of the covers.



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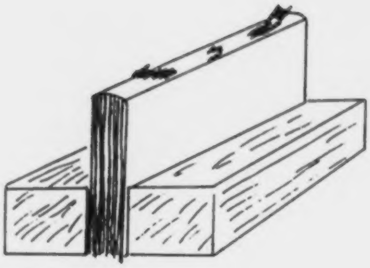
COVER REATTACHMENT

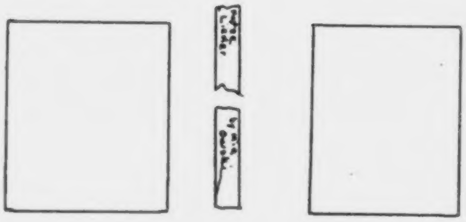
Note: This treatment repairs only those paperback books whose covers have delaminated; the textblock must still be sound. One can use this treatment to reinforce limp covers as well.

1. Place the fore edge of the detached textblock on the bench and place a weight on either side of the text to support it.



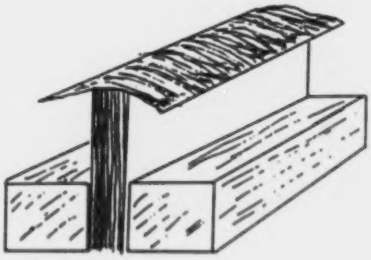
2. With a knife, clean off loose paper and/or adhesive. If the old adhesive is thick, apply a coat of methyl cellulose to the spine and wait until the adhesive has softened to scrape it off.

3. If the paper case is still intact, partially or wholly, separate the spine from the front and back covers by slicing through the joint with a board shear or knife and straight edge.



4. Cut a length of the four inch wide buckram to match the length of the book.

5. Apply thin coat of pva to the spine and center the cloth over the spine; rub firmly until the cloth is well adhered. (Sometimes this means rubbing for several minutes.) ALLOW THE SPINE TO DRY COMPLETELY BEFORE PROCEEDING



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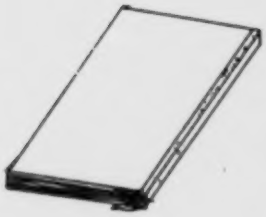
6. Trim approximately 1/8th of an inch from the spine edge of the paper covers.



7. Apply a moderate coat of pva to the back cloth flap, position the board is 1/4" from the spine edge, rub firmly. Place and piece of waxed paper between the last page and the board.

8. Repeat for the front cover.

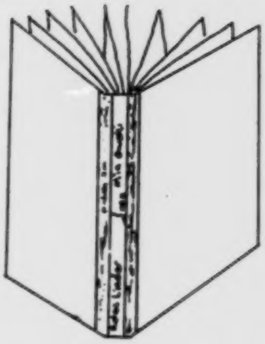
9. If the book receives high circulation, cut two pieces of board (barrier or binder's) which match the book's height, but cut the width 1/4" shy at the spine edge to allow the cloth to flex.

10. Apply a moderate coat of pva to the back cloth flap, position the board 1/4" from the spine edge, rub firmly. Place and piece of waxed paper in between the board and last page.

11. Repeat for the front cover.

12. Adhere the original covers to the boards unless there is some unrepeated relevant print on the inside of the covers, in which case hinge on the covers to the text.

13. Trim the original spine so there is no overlap onto the joint.



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Cornell University

University Library,
Department of Conservation,
701 John M. Olin Library
Ithaca, NY 14853-5301
607/255-9687

The "Stiffening" of Paperback Materials

Manual Guide No. 1A
(1979)

The term "stiffening refers to the strengthening of paperback books by reinforcing the original publisher's cover at the joint and at the front and back. The primary structure of the book is unaltered by stiffening treatment, which does not add significantly to the weight of the book yet appreciably lengthens it's life. Stiffening is amenable to both high-production machine processing and single volume hand work. It is suitable for materials likely to be in active use for short periods of time, or materials likely to be used infrequently over long periods of time. All paperback acquisitions (except for certain rare items) may be stiffened as it is inexpensive, avoids individual decision-making, and is almost totally reversible. Should unexpected high use cause the need for rebinding in cloth, the initial low cost of stiffening is justified as only items of demonstrated high use need to be bound in the relatively expensive cloth form.

Materials.

Materials presently used at the John M. Olin Library of Cornell University consist of: Elvace 1874, polyvinyl acetate adhesive; white-lined chip board, 30" x 40", .042"; Gane Bros. special hinge cloth. Boards are cut to six standard sizes (in centimeters), 19.5 x 13, 21 x 14, 23 x 15, 25.5 x 17, 28 x 21, 33 x 25. The hinge cloth is cut into strips 2 centimeters wide by the height of the standard board size (e.g. 19.5 x 2). Other types of materials may be used providing that they approximate those shown above in thickness. It is very important that the board does not exceed .050" in thickness, and the hinge cloth does not exceed the thickness of "C" grade bookcloth.

Equipment.

If possible, and the volume of materials justify, both a gluing machine and an electric guillotine should be used. If only a small number of items need to be processed, a simple hand paper shear and various small hand tools are all that is necessary.

1 bone folder
1 pair scissors
1 steel ruler (preferably 18" long, showing both inches and centimeters).
1 hand paper shear (preferably about 18" in width).
1 glue brush (preferably Gane's S4-2 rubberset)
1 can adhesive (a P.V.A.)
1 Gluing machine 18" wide, with board gluing attachment (optional)
1 electric guillotine, at least 18" in cutting width (optional)
Sheets of wax paper or rigid plastic

Cornell

Methods of Processing.

Normally the items for stiffening will have been sorted into different sized lots according to the standard board sizes, and should be processed in complete lots (i.e. each operation should be completed on every book before proceeding to the next phase). Processing falls into four basic phases.

1. The book cover is opened and a glued strip of hinge cloth is laid down the joint, extending onto the book itself by approximately .5 centimeters (see figure 1 below). The covers are left open to dry.
2. A board of the appropriate size is glued and laid with the glued side uppermost onto the front of the book approximately .5 centimeters from the joint (see figure 2 below.
3. Holding the board in position, the cover is closed down onto the board's glued surface, and rubbed down with the bone folder, ensuring that the outside joint is carefully creased (see figure 3 below).
4. After this has been repeated on the other side, the book is placed between sheets of plastic or wax paper, and left under a weight along with a pile of similar size books until dry.
5. When all books have been processed, the tail, head and fore-edge are lightly trimmed on the electric guillotine. If no guillotine, the protruding waste edges of the boards and hinge cloth are trimmed off with the hand paper shear.

Occasionally, inside covers may carry information which needs to be saved, such as maps, biographical data, series data etc. A simple method of preserving this information is by photocopying and tipping into the book at the same time as stiffening.

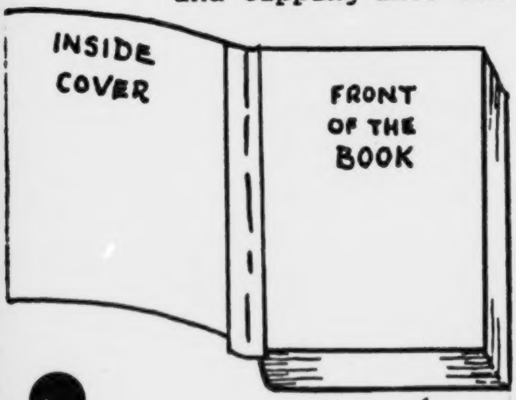
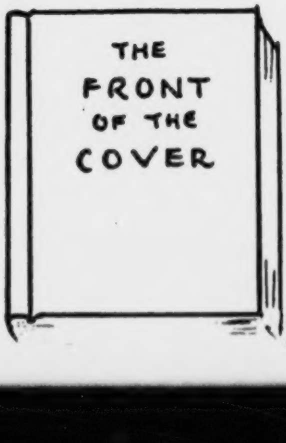


figure 1.



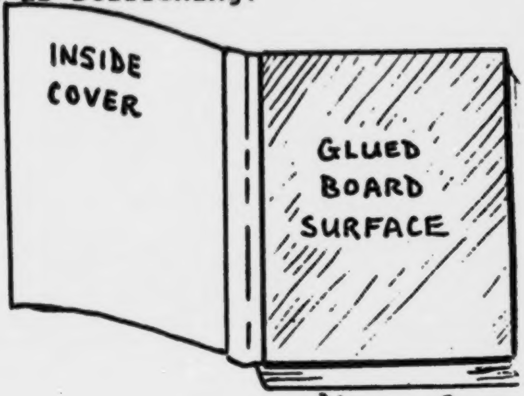


figure 2

✓ PAD BIND

This treatment is used on a softcover volume when the margins are too narrow for staple binding or commercial binding.

Basic technique: Morrow "Pressboard Binding," pages 72-79

Variations:

- We line the spine with muslin using a 50/50 mixture of PVA and methylcellulose.
- We use 60 pt. board for the covers and bristol for the spine strip.
- We do not sand the boards or spine strip where they attach to the book cloth.
- We round the corners of the covers.
- We attach the original spine to the new cloth spine whenever possible.

Michigan

TWO BOOK REPAIR TECHNIQUES FOR GENERAL COLLECTIONS LIBRARY MATERIALS

Ann Ridout and Annette Christian, Conservation and Book Repair Unit
University of Michigan Library, Ann Arbor, Michigan 48109

The Conservation and Book Repair Unit of the University of Michigan Library is responsible for the care and treatment of materials from the library's general collections as well as materials from the rare and special collections. We have developed two treatment innovations that will be of interest to conservators who are responsible for general collections care. The first is a variation of a split-board binding and the second is a way of strengthening spiral bindings.

As a part of general collections care, damaged oversized and heavy books are rebound using a split-board structure. We have found that when a volume's original case is intact and in good condition it is possible to reattach the case using a split-board rather than a case structure. There are several advantages to this repair: the split-board structure is better suited than a case structure for binding oversized volumes; reusing the original case is less time consuming than constructing a new binding; and reusing the original case eliminates labelling.

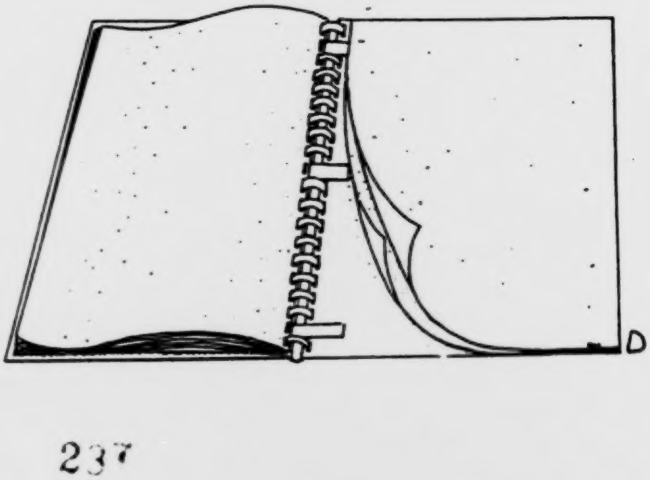
Spiral bound items also pose treatment difficulties. When caring for general collections materials it is simply not economical to remove the spiral and reformat the item. We've found that strengthening the covers and reinforcing cover to cover attachment will increase the durability of spiral bound materials.

What follows is an illustration of these techniques.

STRENGTHENING SPIRAL BINDINGS

This technique was developed for use with plastic spirals. It is especially well suited for materials which must lie completely flat when open, such as music, and for materials whose inner margins are too narrow to allow a change in binding format. The process takes between twenty and thirty minutes to complete.

- Snip three or more rings as appropriate from spiral using scissors.
- Slide strips of tyvek through the open slots and glue them to the inside of the cover.
- Cut the boards and pastedowns to the exact height of the cover and so that the width is the distance from the holes of the spiral to the foredge, minus 1/4 inch.
- Glue the boards and pastedowns to the inside of the covers. Press.



8

Photocopying Replacement Pages

In some cases provision of photocopy replacements may be the least expensive method to repair very damaged text leaves or those disfigured by underlining or marginalia. More often, photocopy replacement leaves are required to complete volumes where text has been torn or cut out. The following documents describe how to make high quality, long- lasting photocopy replacement leaves, and two perspectives on when photocopying, of single leaves or whole volumes, may be appropriate.

Photocopying Replacement Pages

Instructions for Photocopying - Berkeley

Replacement of Missing Text Pages - Ohio State

Repair vs. Copying - Berkeley

Preservation Photocopying - BookLab, Inc

Berkeley

REPAIR VS. COPYING

When reviewing damaged general collections materials the conservation technician has the opportunity to choose to photocopy a damaged leaf or leaves rather than repair it. This decision is based on a number of factors, including the extent and type of damage, the time necessary to make the item usable, and the visual characteristics needed to make the information usable.

In order to keep the cost of repair low, the time spent treating each item has to be balanced against the results. For example, a repair may take an hour to accomplish while a copy may produce an equally usable result in a fraction of the time. On the other hand, sometimes a photocopy might not capture the image clearly, while a repair would preserve all the necessary information. If an item is very damaged the time it takes to prepare it for copying might be better spent repairing it. However, a copy may be preferable if the paper is too weak or brittle to withstand any type of repair.

ENDPAPERS

Frequently, important information is printed on the endpapers, such as maps, tables or illustrations necessary to the reader. Even though library stamps, bar codes or library card pockets have been glued on the endsheets, this does not necessarily mean that the endsheets can be discarded with the boards.

As a general rule, if the information on the endpapers is listed in the table of contents, index, the verso of the title page or elsewhere in the text, it is considered important enough to save. If the same information is printed on the front endpapers as on the back, then a "doublespread" can be made by piecing the two free flyleaves together. If not, then a photocopy must be made of whichever endsheets have significant information.

LIFTING PASTEDOWNS

A pastedown may include a map or chart that uses color-coded keys. If these colors are not clearly identifiable in a black and white copy then the endsheets might have to be soaked off. This is accomplished by immersing the cover in warm water for no more than half an hour, causing the pastedown to separate from the board. Before immersing the cover, a copy of the pastedown must be made since there may be times when the adhesive is so strong or thickly applied, or the paper so brittle or thin, that

Berkeley

the pastedown does not separate from the board intact, ruining the endsheet.

The separated pastedowns are dried between Reemay and blotters, and tipped in the original place, either in front of the textblock before the title page or in back after the last page of text.

PHOTOGRAPHS, ILLUSTRATIONS, AND MAPS

Ultimately, the quality of a copy depends on the original image. Line illustrations will reproduce very well. Halftone illustrations (made from an image photographed through a screen so that the details of the image are reproduced in dots) sometimes will not photocopy well, particularly if they are very dark. A halftone screen placed on the face of the print while copying may improve the image by reducing the dark background and preserving the detail of the original item. If the copy is not legible then the original leaf will have to be repaired instead of photocopied.

Maps and illustrations are often in colors or use color keys. We don't provide color photocopies because they are very expensive, not readily available, and their long term stability is not known. If the color key is not easily understandable in a black and white copy then the item will have to be repaired. If the paper is too fragile to repair, and a copy will not capture the information, the entire item can be lined with Japanese tissue and paste. If this is the case see instructions for lining.

A damaged leaf that cannot be either mended or copied (because of the time involved or loss of information) can be returned to the circulation unit of the owning library for a replacement copy. If there are many leaves or foldouts too damaged to repair or copy, the material should be sent to the Preservation Replacement Division (PRD) for a replacement of the total book.

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INSTRUCTIONS FOR PHOTOCOPYING

I. What to Photocopy

The original leaf/leaves will be discarded after photocopying, so be conservative when choosing to photocopy. See "Photocopy vs. Repair" for more information.

1. Photocopy when a leaf is torn, brittle or otherwise damaged so extensively that repair is either impossible or too expensive because of the time required to repair the item.

2. Photocopy when photocopied pages received form the sending unit are copied poorly. For example, the pages may be out of register or there may be inadequate binding margin.

3. Photocopy when endpapers that have information necessary to the text of the book must be made into a double spread, and the original cannot be retained or repaired successfully.

II. Photocopying Standards

1. All preservation replacement photocopies should be made on plain paper copiers, using acid-free buffered 20 lb. bond papers. Available papers include Howard Permalife, Xerox XXV Bond, and University Products' Perma-Dur (white and cream).

2. All preservation copies should be made "double-sided" or "verso-print" unless otherwise specified.

3. Use a mask on the copier platen when needed to avoid dark borders around the text, to help center the image on the copy and to make possible lining up the recto and verso. Retain the original imposition (recto of original = Xof copy).

4. When possible allow for a gutter margin of at least 3/4".

5. Copies should be straight and parallel to the paper's edge.

6. Foldouts should be copied in sections if they are larger than the largest available suitable paper. Copy in sections, allowing sufficient overlap for good alignment. Include the 3/4" binding margin.

7. Everything in the original text should be copied, no matter how strange it may seem, with the exception of extraneous material laid in or tipped in to the volume.

The Ohio State University
LIBRARIES

Preservation Office

(Please file for future reference)

Memorandum

No. 89-1

June 1989

REPLACEMENT OF MISSING TEXT PAGES: TIP-IN OR REBINDING

In nearly every library the need arises for the replacement of missing text pages in important books and journals. The following basic procedures outline the best recommended practices for the replacement of missing text for tip-in or, if necessary, the complete rebinding or replacement of the volume itself.

> NOTE: Because of text paper embrittlement, lack of adequate inner margins, or other physical limitations, some volumes are not salvageable using this "tip-in" or rebinding procedure. Be advised that there are these limitations to the procedure in this Memorandum.

GENERAL PRINCIPLES INVOLVED WITH TIP-INS:

- Copies of the replacement text must be made using alkaline ("acid-free") paper in the photocopying process. Such paper (Permalife, Xerox XXV Bond, or other types of alkaline paper in 8 1/2x11" or 8 1/2x14" sizes) is available from the Collection Maintenance Division, r.007, x4-4735. Copies made from microform reader/printers should be re-copied onto alkaline paper.
- Copies of the replacement text should possess, preferably, these attributes:
    - they are copied double-sided (back-to-back) with good registration (i.e., the text and margins on both sides are lined up together). See pp. 4-5 for the techniques to be used;
    - they have high quality legibility and contrast;
    - they should be copied one page per exposure, complete and in the order of the original;

... more ..

106 Main Library 1858 Neil Avenue Mall Columbus, OH 43210 614-292-6151
Bindery Preparation Division, 037 Main Library, 614-292-6515
Collection Maintenance Division, 007 Main Library, 4-4735

Ohio State

GENERAL PRINCIPLES INVOLVED WITH TIP-INS: (CONT.)

- Copies of the replacement text should possess these attributes, cont':
    - they do not smudge easily when handled; (if they do, the copy machine requires service to improve the fusing of copied images);
    - they have adequate "gutter" (inner, binding) margins of at least 3/4" for tip-in, and 1" or more for use in rebinding the whole volume; and
    - they are the appropriate size (paper and text) for the volume into which they are to be inserted.
- Bound volumes' physical limitations will allow usually up to six (6) or fewer replacement sheets in a tip-in. More than 6 tipped-in sheets will usually require more drastic action, such as rebinding or replacement.
- Tip-in or rebinding of "brittle" books will probably not be possible.

HOW-TO: THERE ARE TWO (2) GENERALLY RECOMMENDED METHODS FOR HAVING REPLACEMENT TEXT TIPPED-IN OR RE-BOUND:

1) The Do-it-yourself Approach, performed by holding library personnel who:

- Obtains the replacement volume or page(s) through Interlibrary Loan (ILL) or from another campus library. If another campus library's copy cannot be loaned, request a high-quality photocopy of the needed pages, then re-copy following the guidelines on page 4.
- Photocopies the replacement pages onto alkaline paper, following the attached illustrated guidelines (page 4).
- Inserts the tip-ins, following the illustrated guidelines. There should be a maximum of six (6) double-sided sheets; if there are more than 6 sheets to be inserted, "2)" below is to be followed.

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Ohio State

2) The Ask-the-Collection-Maintenance-Division-Staff-for-assistance approach:

- The location library personnel obtains the replacement volume or page(s) through ILL or from another campus library.

- The location library personnel forwards the replacement volume or page(s) and the original volume to the Collection Maintenance Division, accompanied by a Collection Maintenance Streamer marked appropriately (item charged on LCS to RESPRSRP).

- Collection Maintenance Division staff makes the copies for insertion. They tip-in the pages, if possible. If tip-in method is not possible, they forward the material to the Bindery Preparation Division for commercial library binding, and so inform the holding location. Collection Maintenance Division staff returns the volume used for replacement text to its appropriate place (to ILL or other campus library) by the specified due date.

- For replacement copying of entire monographic volumes or entire serial issues, contact the Monographic Acquisition Division for procedures. Collection Maintenance Division staff cannot copy such materials in their entirety.

- If neither routine tip-in nor commercial binding is feasible, both original and replacement volumes are returned to location library with request for a decision by the collection manager for appropriate action (e.g., withdraw, seek a replacement, etc.).

Questions and comments regarding the general procedures should be referred to the Department Head (x2-6515) Questions regarding individual problems should be referred to the Supervisor of the Collection Maintenance Division (x4-4735).

Thank you.

WLB/jad
1288w
attachment: Illustration: Photocopying for Tipping-In or Rebinding
Illustration: Tipping-In Loose Pages

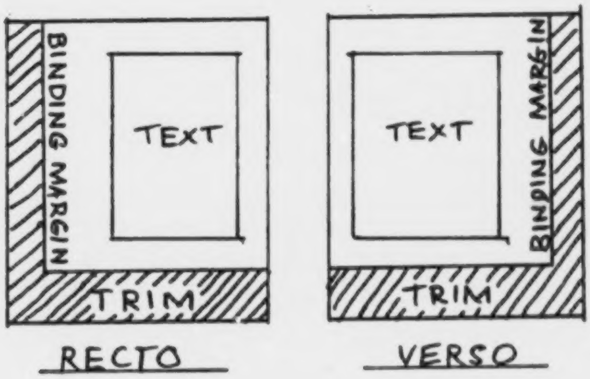
... more ...

Ohio State

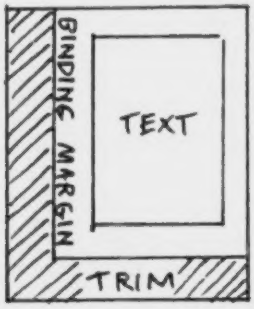
PHOTOCOPYING FOR TIPPING-IN OR REBINDING

1. For double-sided copies the text should be reproduced in the upper right-hand corner on the recto (front) side and in the upper left-hand corner for the verso (back) side.

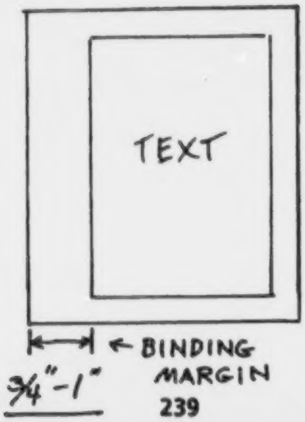
   The margins should be uniform and the text on both sides should be in alignment.


BINDING MARGIN
TEXT
TRIM
RECTO
TEXT
BINDING MARGIN
TRIM
VERSO

2. Single-side reproductions should be in the upper right-hand corner.


BINDING MARGIN
TEXT
TRIM

3. The binding (or tipping-in) margin should always be on the left, and should be at least 3/4" to 1" wide.


TEXT
← BINDING MARGIN
3/4"-1"

... more ...

BookLab BookNote 10

Preservation Photocopying

BookLab, Inc.
Austin, Texas

Booklab

Preservation Photocopying

The effect of photocopying on the operation of libraries is momentous. Library patrons are using book collections as accessories in their quest for copies. Library foyers hum with an industrial photocopier activity that challenges the established precepts of librarianship and reader services.

A major change is occurring as photocopying is more widely used by librarians to duplicate the entire texts of deteriorating books. It is now possible to create surrogate paper copies to replace brittle or damaged materials. These copies can be stronger and more durable than the original, convey information as a three-dimensional facsimile, and be economically replaceable in the event of loss or damage.

Selection of Materials

A library's backlog of books withdrawn from circulation encompasses the spectrum of damage and deterioration. Preservation duplication is a useful option for books with embrittled text paper or for those that are structurally damaged but lack sufficient gutter margin for repair or rebinding.

To decide whether to duplicate printed materials, the preservation librarian will search the title for available reprints or microform copies. It is important to consider all of the library's copies of a given title and all the volumes of a set together for a complete appraisal of its physical condition.

Preservation photocopying can be used along with microform duplication. Photocopy appeals to libraries with specialized collections, such as art and music, where the preference and need for a high quality paper replacement copy discourage microfilming. Photocopy is useful to all libraries to produce service copies of deteriorated reference works. Other factors influencing a choice of photocopy over film are the maintenance requirement and expense of microform readers and the poor quality paper copy prints from microforms. A paper copy can be shelved and used following ordinary library procedures. Certain duplication needs, such as replacement of leaves in damaged books, completion of single volumes, or inclusion of missing numbers in out-of-print serials, can be accomplished best by photocopy.

Part of the rationale for preservation photocopy is that fragile originals can be safely stored as uncirculating "leaf masters" which can be retrieved for duplication by more advanced electronic informa-tion technologies on the horizon. The new service copy gives a durable, stable reproduction of the original from which patrons can obtain fine second generation personal copies.

Basic Technology

Preservation photocopy uses xerography, based on the principle that the electrical conductivity of certain materials is affected by exposure to light. If a photoconductor is given an electrostatic charge and then exposed to light, the exposed area will lose most of its charge. In a photocopier, a charged photoconductive surface is exposed to light reflected from the page of a book. A charge pattern develops on the surface which corresponds to the pattern of dark areas on the paper. The photoconductive surface is dusted with toner (powdered ink), which clings to the charged areas. A new piece of paper is laid over the photoconductive surface. By heat and pressure, the temporarily melted toner is fused to the new paper. When the new paper emerges it bears a facsimile image of everything on the original piece of paper dark enough to have prevented reflection. Xerography, combined with high resolution optics, refined paper transport mechanisms, and quality paper stocks, can yield exceptional image reproduction with operational reliability.

BookLab

Production Techniques

The following guidelines for preservation photocopy are based on production techniques used at BookLab. The aim is to produce a preservation photocopy with clear, well fused images, accurately collated and complete, and bound for library service as a hardcopy reference book.

Preparation of the originals

Originals must be inspected and prepared for reproduction. Each book is processed individually, following treatment instructions provided on an accompanying work order. Books may be cut into separate leaves, disbound into folios, or copied in their bound form. Books to be cut are inspected for narrow gutter margin, inner foldout folds, manuscript annotations, printed tables, centerfold illustrations or other components which could be damaged by cutting the folds. If cutting could crop the contents, the book or pamphlet is hand slit through the folds.

Cutting is done on a hand guillotine. The covers are detached and the text divided into segments using a knife, working from the inside. The minimum amount of trim necessary to release the leaves at the spine is applied to each segment.

Broken or torn leaves are mended with an archival mending tape to facilitate copying and allow the original book or "leaf master," to be reassembled for storage in as complete a form as possible.

Reproduction

Archival quality paper which meets or exceeds ANSI Standard Z39.48-1984 should be chosen. An immense selection of alkaline papers which meet this standard is available in a range of weights and color shades. Factors influencing the choice of paper are the ease with which the paper will feed through the photocopier, the receptivity of the paper to toner fusing, and the permanence and durability of the sheet. A source of information about paper characteristics and availability is the *Alkaline Paper Advocate*, published bimonthly by Abbey Publications, 320 E. Center Street, Provo, Utah 84606.

Paper grain should run head to tail in the finished book if the book is to open without resistance. Sheet sizes are dictated by sizes the copier will receive and by the size of books to be copied. The copy should have margins larger than the margins on the original page and sufficient in the gutter for subsequent patron photocopying to capture the entire text without damaging the book.

Bound preservation photocopying assumes the ability to reproduce duplex printing. A photocopier with duplex capacity can be set up to produce a registered recto and verso reproduction of the whole text. Features such as electronic editing, photo screening and manual exposure settings are almost essential for clear reproduction of the image with minimal reproduction of blemishes. A copier with a photo mode will reproduce halftones and illustrations to a much higher standard than one which offers auto exposure only. Electronic trim coordinates entered in the copier memory can erase the black image of the edge of the original pages, and can be set so as to mask yellowed or damaged edges. Color illustrations and oversize foldouts may be copied on a color copier or one designed to feed large paper sizes.

Constant awareness of the condition of the original and the quality of the copy is necessary to minimize errors and blemishes while the original is at the copier. Discoloration of the original, broken pages, faint text, text and/or graphics drifting in relation to the margins, cropped margins, manuscript annotations, illustrations or information extending into the margin, and page size variations must all be compensated for. The copy text must maintain consistent clarity and contrast, exhibiting full black print, even gradations and full medium values in halftones, on an unblemished paper field without grey zones at the edges.

Registration of recto and verso on a text copy page should vary less than 5mm (3/16ths inch) from the registration of the original. A copy showing the position of an original page on the entire sheet of paper onto which it is copied, before edge coordinates are activated to mask the edges, is known as a "trim sheet" and constitutes a guide for correctly trimming the textblock of the copy.

A colophon page providing date, paper stock, and producer information should be bound into each copy. Extra blank leaves are added at the front and back of the copy which become flyleaves in the bound book.

Copying from bound books requires additional patience and careful handling. As volumes are flipped over and flattened for exposure, then flipped back for page turning, damage may result. Copying from disbound folios is less treacherous, but still requires additional attention to page sequence. Care must be taken that pages not being copied which extend into the cover hinge or hang over the front of the copier are not damaged.

Collation

Collation verifies page order, legibility, and completeness of the copy text, and the duplication of some artifactual qualities of the

BookLab

original. Each book should be checked by two different persons who scan the copy for errors. The collators flag errors and return the copy and original to the copier operator for corrections.

Flawed or reject pages result from copier misfunctions, such as double paper feeds and paper wrinkling or creasing; operator errors include missed or reversed pages, blurred or obscured text, missing and cut-off text, and poor exposures. Some deficiencies in the original may be correctable, such as faint printing or blotchy background. Flawed pages must be examined to determine whether recopying them will be an improvement. A page missing from the original is represented by a blank sheet in the copy which will provide a stub for tipping an eventual replacement copy leaf. Colored blank sheets are inserted to mark the positions of foldouts or color plates which will be put in later. After collation and correction, the trim sheet is correctly posi-tioned on top of the copy text, and the work is sent to the bindery.

Preservation photocopies can be produced on office copiers provided that the paper used and image fusing meet archival standards. Some inhouse copying, such as production of replacement leaves, can always be handled conveniently on any copier available. However, a full preservation photocopy program will require a well equipped facility and the staff to incorporate standardized preparation and production methods, careful, deliberate handling of originals and copies during production, and accurate collation.

Binding

Standard binding sizes can be established in the context of particular jobs or subject matter, such as music or government documents. The texts of preservation photocopies, unlike texts of rebound originals, can be trimmed to even units in height. Trimming to the even centimeter or quarter inch is practical. Single-fold endpapers made of a heavyweight alkaline-buffered paper stock and cut to copy sheet sizes are placed under the text and trimmed with it. The trim sheet will guide trimming of the textblock to assure an adequate increase in the margins of the copy. An increase in page size of 5mm (3/16ths inch) at head, tail, and fore-edge, and 20mm (3/4ths inch) from the gutter or fold edge of the original is suggested. A practical trimming sequence is gutter and fore-edge first, with head and tail trim following double-fan adhesion of the text.

Center folds, foldouts and pockets can be accommodated with blank stubbing sheets, perforated at the gutter for easy removal after binding. These stub sheets are inserted in the textblock in a quantity to compensate for the enclosures, and are bound in with the text. Foldouts can be mounted to perforation sheets and then bound into the book. A double trim sequence enables the foldouts to be trimmed to height with the bound text.

Photocopied texts are double-fan adhesive bound, with the option to oversew. With double-fanning, flat backed forwarding is satisfactory for texts up to 13mm (1/2 inch) thick. Rounded and backed forwarding is used for thicker texts. Double-fanned texts over 40mm (1-9/16ths inches) thick tend to sag out of their cases and should be reinforced with additional lining and cover-to-text attachment as needed.

Covers should meet or exceed library binding standards. Titles may be stamped or books may be provided with laser printed paper labels. The finished book is then inspected. The leaf master can be shrink wrapped for reshelving and storage. If copies and leaf masters are shipped they should be packed and shipped separately as a safeguard against loss.

Preservation Photocopy: Future Developments

The role of bound paper replacement copies in the context of library services is subject to change. The rapid advance of electronic access methods, conversion to and publication of electronic information, can decrease patron use of paper collections, but it seems that the physical activity of image capture from the paper collections will accelerate with availability of electronic access systems, as well as in response to growing preservation duplication programs.

Copier duplication of paper records will probably soon be accompanied by production of a digitized master. Digital scanning will supplant optical projection, and digital storage will become a routine function of office copiers. Digitized information and its storage media can be expected to play an important role in library collection development. In preservation duplication direct-to-digital image capture could evolve as the primary product, with bound service copies as an optional accessory.

Preservation photocopy is an immediate response to patron need. As portions of paper collections are withdrawn from circulation and from central campus locations, and as electronic access technologies are embraced by library services, the need for service copies will increase. The immediate challenge for the preservation librarian is to extend the service life of fragile paper based collections. The system of preservation photocopy does just that.

Book Lab

Sample brittle leaf with its preservation photocopy onto alkaline paper.

9

Paper Repair

The repair of torn text leaves is one of the fundamental techniques of collection conservation. A wide variety of adhesive recipes, repair papers, and techniques are used to produce strong, flexible, unobtrusive repairs. Techniques differ according to the type of tear (overlap or not, straight or curving, corner or along the fold, etc.) The section includes a representative sampling of methods.

Paper Repair

Paste Bonded Mending - MIT

Leaf Repair: Paste - Berkeley

Leaf Repair: Japanese Tissue and Paste - Berkeley

Filling Corners - Berkeley

Hinges: Japanese Tissue - Berkeley

Guarding Folds: Single Folios - Berkeley

Guarding Folds: Whole Sections - Berkeley

Mending With Japanese Tissue and Wheat Paste - Ohio State

Guarding Signatures - Ohio State

Backing and Laminating with Heat-Set Tissue - Ohio State

Mending with Filmoplast or Ademco Tape - Ohio State

Guarding Signatures - Cincinnati

Backing and Laminating with Heat Set Tissue - Cincinnati

Mending with Japanese Tissue and Wheat Paste - Cincinnati

Mending Feathered (Overlapping Tears) - Cincinnati

Mending with Filmoplast or Ademco Tape - Cincinnati

Berkeley

LEAF REPAIR: PASTE

Use this procedure when the edges of a tear overlap. If they don't, use the paste and Japanese tissue repair.

Use Fueki paste, a pre-made Japanese starch paste.

Procedure:

1. Examine tear to see if edges overlap. Flatten edges gently. See if there are any areas of the tear where paper is missing. Align the edges of the tear and match any type or print exactly.

2. Place Reemay and blotter under the tear. Weight the tear with edges matched.

3. Dilute paste minimally. Using fine line brush, paste only the edges of the tear. Dry with tacking iron through silicone release paper.

4. Curl test the tear. Are the edges matched accurately? If not, moisten the repair to release the paste and redo it. Does the repair curl evenly with the leaf or do any fibers or edges stick up? If the latter, apply more adhesive carefully. Are fibers on the verso lifting up? If so, repeat process. Dry again.

5. Curl test again. Does the leaf crease at the repair instead of curling? If so, consider applying tissue over the paste repair.

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LEAF REPAIR: JAPANESE TISSUE AND PASTE

Procedure:

1. Do paste repair first, if the tear has overlapping edges.

2. Select a Japanese tissue that best matches the torn leaf in color. Choose a slightly lighter weight than the leaf, since the paste itself will add thickness.

3. Needle tear a strip of tissue. The strip should be narrow, extending only about 1/16" from each side of the tear. The shape of the tissue should follow the shape of the tear.

   A needle torn strip should have some fibers at the edge, not as many as a water torn strip, but more than a clean cut. (Japanese tissue can conveniently be clipped to a piece of blotter and pre-torn against it.) The thinnest tissues may be either cut or torn.

4. Dilute paste to a milky consistency. Paste up the strip on a waste sheet, working from the center outward to spread the fibers.

5. With tweezers, place the strip on the tear. Dry through silicone release with a tacking iron.

6. Curl the repair. Re-adhere any loose fibers. If leaf creases at the repair rather than curls, consider applying tissue to verso of tear. Consider weight of tissue needed.

Berkeley

FILLING CORNERS

Procedure:

1. Tear patch to shape.

Place the black-and-white board under the missing corner. Put a piece of Mylar over the corner. Fold a piece of Japanese tissue larger than the missing corner and put it over the Mylar. Needle tear the patch into shape by tearing through the two folded layers of Japanese tissue at once. Make the patch about 1/16" larger than the hole.

Select tissue of the proper tone and weight, considering the tone and weight of the original paper, and that two layers of patch, with a layer of paste in-between, will be operating.

Holes: Tear two separate patches and proceed as follows.

2. Paste up patch and place it.

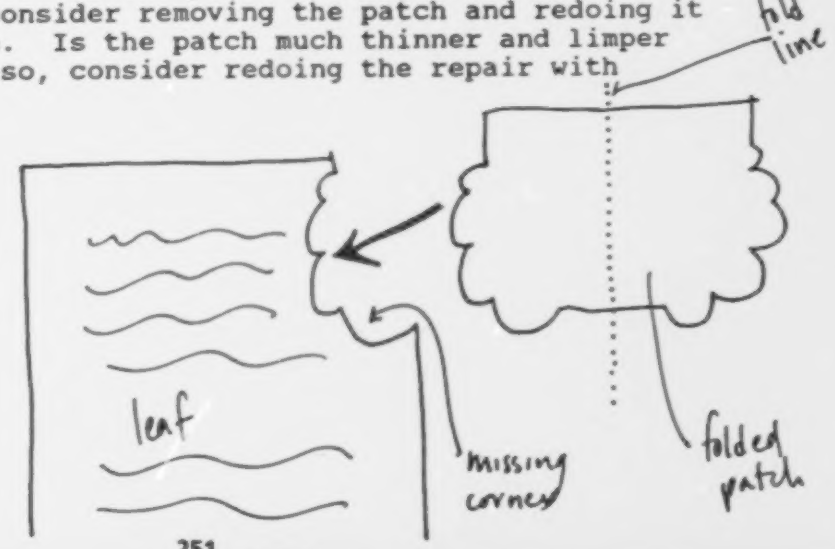
Put blotter and Reemay under the hole. Paste up the whole patch with dilute Fueki paste and lay it on the hole, orienting the patch to match the contours of the hole. Fold the patch over, leaving margin on both sides.

3. Dry the patch.

Dry the repair through silicone release paper with a tacking iron.

4. Quality control.

Curl test the repair. Is the patch thicker or stiffer than the leaf? If so, consider removing the patch and redoing it with thinner tissue. Is the patch much thinner and limper than the leaf? If so, consider redoing the repair with heavier tissue.



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GUARDING FOLDS: SINGLE FOLIOS

1. Select repair tissue.

Select a Japanese tissue that matches the text paper in color, and that is comparable in thickness and flexibility.

2. Tear strip.

Needle tear a strip of the tissue paper. Judge the width needed and allow enough tissue to overlap the text paper on both sides of the guard. Make the strip longer than the leaves to be guarded.

3. Paste up guard.

4. Apply guard.

If the folio being guarded is the innermost one of the section, put the guard **inside** the folio. Otherwise put the guard on the outside of the folio.

When guarding folds of broken foldouts, for example (not torn conjugate leaves) put the guard either on the inside of the fold or the outside, depending on where the image or text is and which will work better.

5. Dry the guard.

Use a tacking iron to dry the guard through silicone release paper. Leave it slightly damp to allow for folding.

6. Trim the guard.

Trim guard at head and tail with scissors.

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GUARDING FOLDS: WHOLE SECTIONS

Procedure:

1. Select repair tissue.

Select a Japanese tissue that matches the text paper in color, and that is comparable in thickness and flexibility.

2. Tear strips.

Needle tear a strip of the tissue paper. Judge the width needed to accommodate the folios that will nest inside of each other. Also allow enough tissue to overlap the text paper on each side of the guard. Make the strips longer than the leaves to be guarded.

When many folios are being guarded, needle tear all the strips now.

If folios have irregularly damaged folds tear strips to shape using black and white board.

3. Paste up strips.

Use dilute paste. When working in batch mode several strips may be pasted up at one time, but they must be used before the paste dries.

4. Apply strips.

For the innermost folio of a section apply the strip to the **inside** of the folio. Have the gutter edges of the (detached) leaves butted together when guarding. Align the foredges of the conjugate leaves.

For all other folios of a section apply the strips to the **outside** of the folio as follows:

a. Start from the center of the section.
b. Jog the detached folio to the foredge, while wrapped around the inner folios.
c. Place the paste repair strip on a piece of Reemay, paste side up.
d. Center the folio onto the pasted strip.
e. Pull the Reemay and guard firmly up and over the folio, and pat it into place.
f. Peel back the Reemay.

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5. Dry guard.

Lightly run the tacking iron over the guard, front and back, while it is in position around the section.

6. Repeat for all broken folios.

Continue to paste up strips, wrap them around the torn conjugate leaves, and dry in place until the whole section is guarded.

7. Trim.

Trim the guards to the exact height of the conjugate leaves.

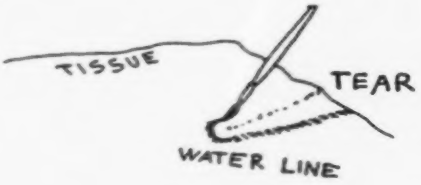
8. Quality control.

Check the guard for good adhesion and check the folios for evenness at foredge, head and tail. Redo as necessary.

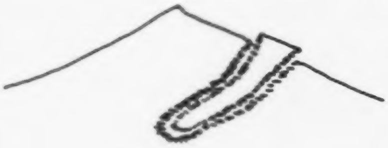
Mending with Japanese Tissue and Wheat Paste

Books from the Rare Book Collection, or other books that are unique in some way, are never mended with tape. Selected Japanese tissue, compatable in weight and color to the text material is used. It is torn wet or dry to the desired shape.

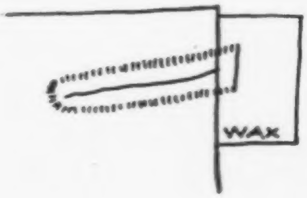
Mending Straight Tears



1. Place wax paper under the tear.
2. Position the tissue over the tear and paint a water line on either side of the tear (the total width will be ½" to 3/8").



3. Pull excess tissue away from the outlined shape.



4. Paste out the shape and position it over the tear with about ½" extending over the edge of the page. Rub down first through wax paper then through waste paper to remove any excess moisture. Either turn under the tail or cut it off.
5. Leave the wax paper in place under the page and put another piece over the mended tear. Close the book and put under a weight until dry.

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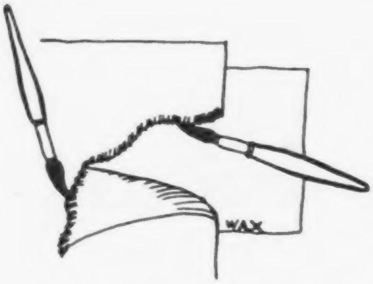
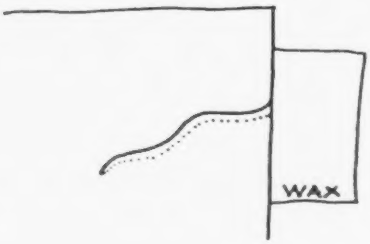
Mending Feathered (overlapping) Tears

This kind of tear frequently changes grain direction. The paper has split in layers. The object of this repair is to restore the split parts into one thickness.

1. Place a piece of wax paper under the tear.
2. Carefully separate the edges of the tear. Apply the wheat paste, or PVA mixture with paste blended together, on both edges.
3. Bring the edges together, matching the text. Bone well through wax paper and then through clean waste paper.
4. A small piece of tissue can be pasted over the tear if necessary. Or a piece of heat-set tissue can be cut to the shape of the tear and affixed.





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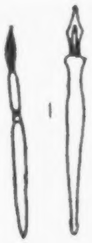
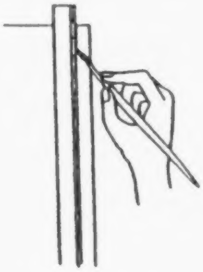
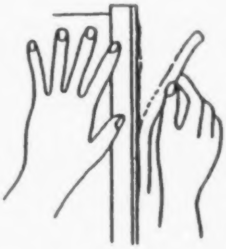
Guarding Signatures (in preparation for resewing a text block)

The rule of thumb is that the Japanese tissue used for guarding should be compatable with the book paper in weight and color as much as possible. The guard should also be as narrow as possible, covering only the damaged part of the fold. A guard that is too wide is not only esthetically unpleasing, but it does not strengthen the paper and often creates a cutting edge for paper that is fragile.

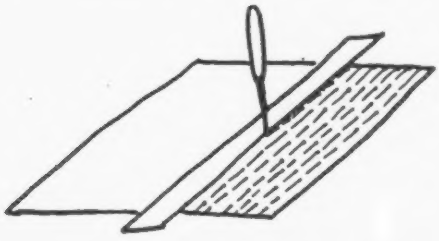
1. Prepare the signatures by removing all old glue and other debris from the signature folds. Flatten the folds. If necessary wash the paper to reduce stains and/or freshen the paper.
2. Prepare the paste. It should have enough body to it for adhesion (about the consistency of mayonaise). Paste that is too "wet" will leave "tide" line on the paper.
3. Prepare the guarding strips using either the wet (watercolor brush or speedball nib dipped in water) or dry (scoring the tissue with an awl) method.
    a. If a watercolor brush or speedball nib is used the edges of the guard will be very feathered - good for soft, textured paper. The brush is dipped in water and a line of water is drawn along the length of the ruler. The guard is pulled gently away. The grain is parallel to the length of the ruler.

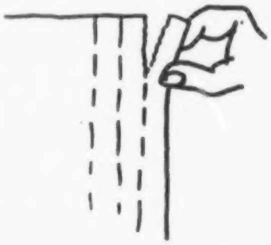






    b. If an awl is used the fibers will be very short and lend themselves well to smooth or clay coated paper. Since no water is used you can score a series of lines the width of the guards. Pull the strips apart.





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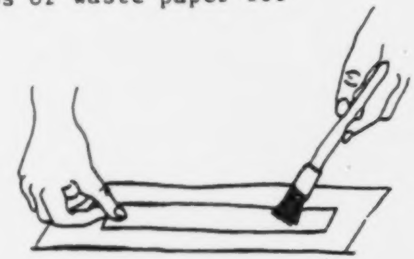
c. Make guards 3/8" to 5/8" wide and about an inch longer than the height of the signature.

Usually it is the outer fold of the signature that is broken or damaged and only it is guarded. However, when inner folds need repairing start guarding from the center of the signature and work outward. Always guard the full height of the fold.

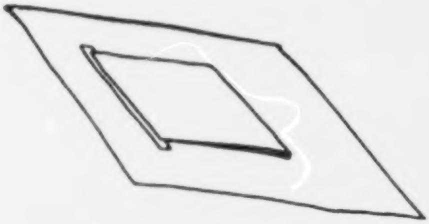
5. Set aside the area where you are going to work. Have clean waste paper or a piece of Mylar to paste on and plenty of strips of waste paper for pressing.

6. Lay the guard on the waste paper. Hold it with your left hand (or right hand if your lelfhanded) and apply paste to the remaining part. It must be well coated.

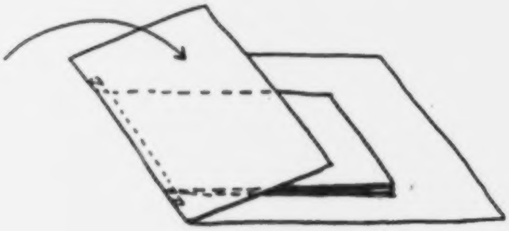


7. Pick up the pasted guard and turn it over onto clean waste paper and lightly rub it to remove any excess paste. Quickly life the guard up and lay it pasted side up onto wax paper.

8. Center the signature on the guard do that the fold is parallel to the length of the guard.

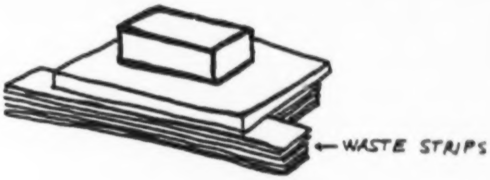


9. Holding the signature in place, left the wax paper up and over the fold of the signature. Press the guard firmly around the fold so that it is well attached to the signature.

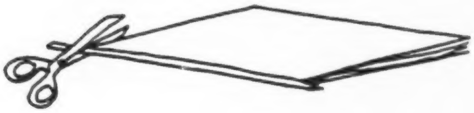


10. Remove the signature from the folded wax paper. Bone it well with the flat side of your bone folder several times through clean waste paper. This helps remove any excess moisture.

11. Allow guarded signatures to partially air dry then stack them on top of each other with strips of waste paper between. Place a light weight on top of the aligned stack and let the signatures dry.



12. Trim the excess tissue from the top and bottom of each signature with scissors or scalpel. The signatures are ready for sewing.



Mending with Filmoplast or Ademco Tape

Unless the repair ticket inserted in the book indicates otherwise, use either Filmoplast or Ademco tape to mend torn paper. Both of these tapes are mounted on a paper carrier that will separate easily when removed from the roll. Unlike Scotch tape (which we never use), this tape can be handled without it sticking to your fingers or the paper because it needs pressure to make good adhesion. You can use it as it comes off the roll or tear it into narrower widths.

1. Take off the amount needed and place it over the tear.
2. Place clean waste paper over the tape and bone through it very well.
3. Either trim off any excess tape at the edge of the page or fold it over to the underside of the page for reinforcement.

JAPANESE TISSUE REPAIR (flat paper)

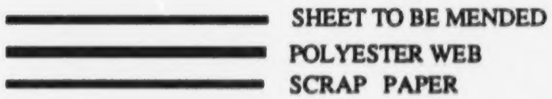
Materials :

- Japanese tissue paper
- ruling pen
- water
- wheat paste
- microspatula
- bone folder
- paste brush
- flat brush
- scrap paper
- polyester web
- blotter paper
- weights

Note: Japanese tissue mend should consider the weight and tone of the text to which it is attached. The mend should never be heavier in weight than that of the original paper. Consideration should be made if text must be read thru the mend. Always place the mend on the less conspicuous side of the leaf. Japanese paper mends should be no more that 1/8" in width by the length of the tear. If tear is curved or has an unusual contour, tissue should be torn to match shape. Several pieces of tissue may be joined to cover an angled tear.

1. Prepare paste: the consistency of heavy cream.

2. Place item to be mended over a strip of poylester web which is placed over a sheet of scrap paper.



3. Identify underlaps and overlaps of tear.

4. Using a thin brush, apply paste to the edges of one side of the tear. Carefully seal the tear according to its underlaps and overlaps, correctly placing the edges of the tear together.

5. Place polyester web over the mended area and scrap paper over the web. Bone down. Remove scrap.

6. Place blotter paper over polyester web and pasted area; weight to dry.

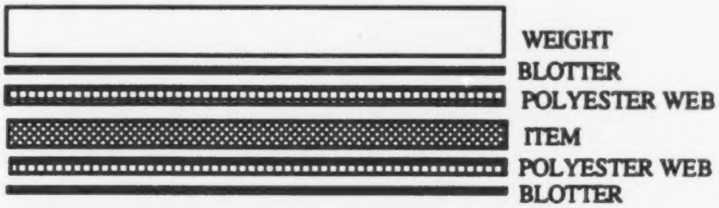
7. Prepare mending strips to appropriate size. Strips may be made by:
   a. water tearing: using a ruling pen or thin brush with water against a ruler edge-produces a mend with very long fibers - a "soft edge".
   b. using a needle against a ruler - produces some visible fibers but not a very soft edge.

8. Paste out mending tissue onto scrap paper.

9. Lift mend off paper with microspatula.

10. Position mend over torn area, using fingers and/or microspatula. Once in place, brush the fibers of the mending tissue onto the paper with a dry brush in a horizontal motion.

11. Sandwich mend between polyester web and blotters and weight to dry.



10

Tightening Hinges and Hinge Repairs

Hinge repair and hinge tightening are treatments used for case bound books when the textblock and the case are intact, but the cover-to-text attachment is failing. Usually the hinge of the pastedown/free flyleaf folio is lifting or damaged. Looseness may be due to poor adhesion of the pastedown and/or super as a result of fore-edge shelving, inadequate backing of the textblock, or simply the effects of gravity on a heavy textblock. If left unrepaired the hinge and/or pastedown will tear, causing the text to separate from the case partially or fully and necessitating a more expensive repair. Some hinge damage results from malicious attempts to cut the textblock away from the case or to cut out pages.

Hinge tightening consists of an application of adhesive to the separated layers to secure the textblock in its case again. Other types of hinge repair include reinforcement or replacement of the pastedown/free flyleaf folio, or the super. The section includes the standard knitting needle technique, and some variations on repair or replacement of broken hinges.

Tighting Hinges and Hinge Repairs

Tightening Books In Their Cases - Cincinnati and Ohio State

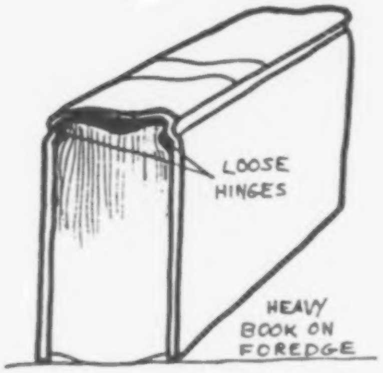
Aesthetic Hinge - Ohio University

Internal Hinge - Ohio University

Replacing Broken Super with Tyvek - Berkeley

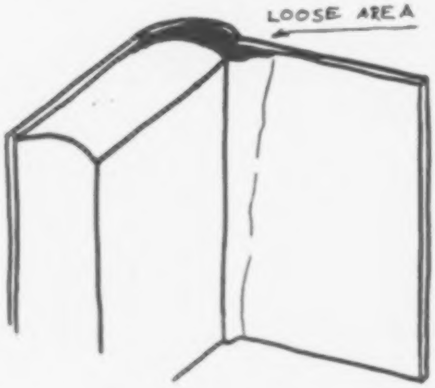
Tighten Hinge Procedure - Emory

TIGHTENING BOOKS IN THEIR CASES

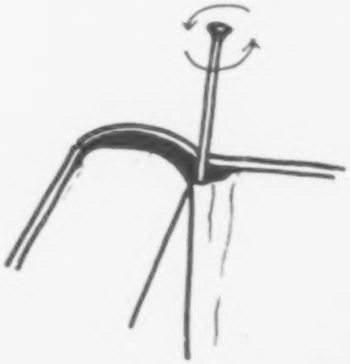


Books can look like this when

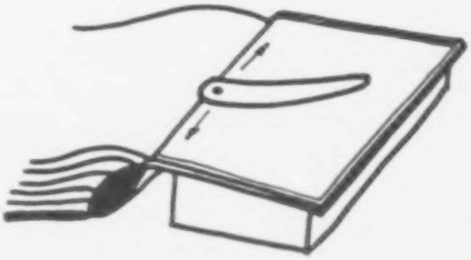
- they are heavy and are shelved on their fore edge, or when
- they are deposited in a book drop, or
- from normal wear and tear.



1. Stand the book up and fan the covers back. The area where the pasted down endpaper is loose will be visible.



2. Dip a knitting needle into about 5-6" of PVA. Let the excess drip off. Insert the needle down into the loose area. Turn and move the needle until the entire area is coated. You may have to recoat the needle.



3. Lay the book down with the cover open and supported and smooth the area where you've just applied the PVA. Wipe off any adhesive that might ooze out.

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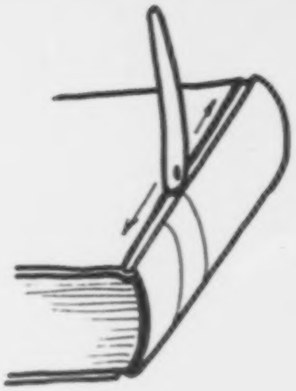
4. Insert wax paper between the bookblock and cover and close the book. Bone the outer joint.



5. Repeat steps 1-4 for the other cover if necessary. Nip book in the press and then leave under a weight over night to dry.

275

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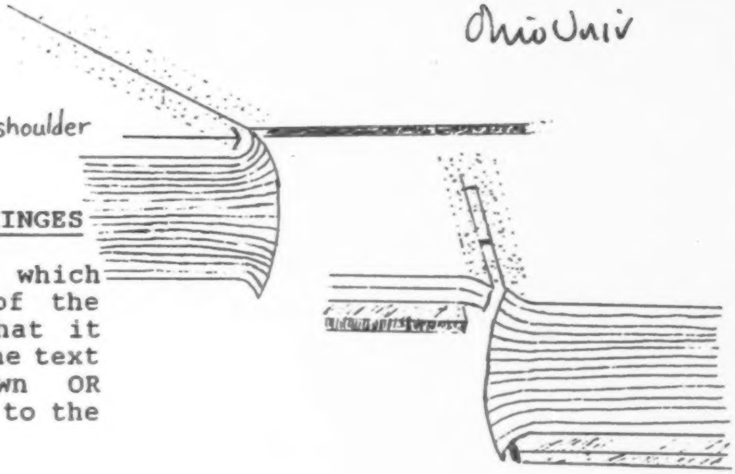
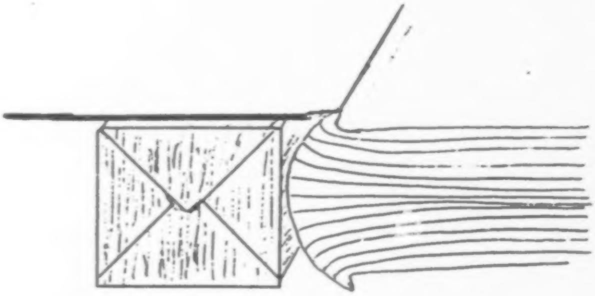


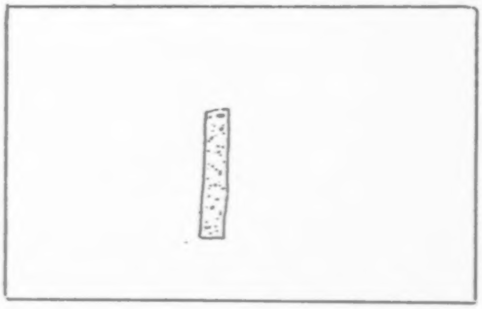
AESTHETIC HINGES

1. Select a mending tissue which looks best with the color of the text. Cut the tissue so that it extends from the shoulder of the text to 1/2 inch onto the pastedown OR from the shoulder of the text to the shoulder of the text.

2. If this hinge is for the joint area of the text, support the uppermost board with one or more pressing boards so the volume does not flex as the hinge is positioned.



3. Place the tissue on a waste sheet of paper, apply a thin coat of adhesive to the mending tissue.



4. Lift the tissue from the waste sheet and position it over the joint or gutter.

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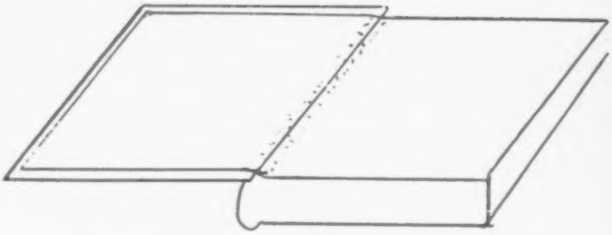
5. Rub the tissue gently into place to ensure adhesion and smooth out wrinkles.

6. Trim the tissue flush with the head and tail of the textblock.



7. Place waxed paper in the gutter, close the book and allow the hinge to dry.

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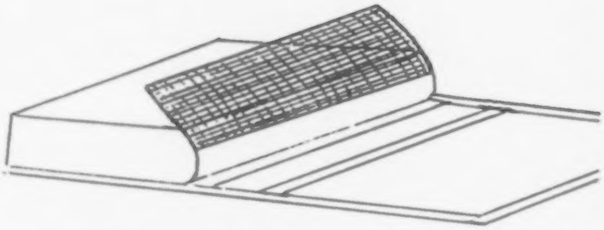
INTERNAL HINGE

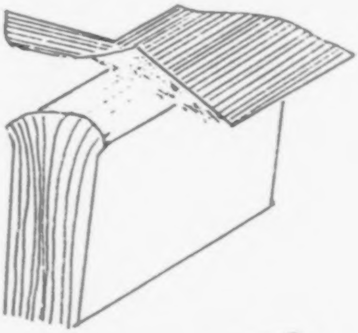
NOTE: If the endsheet is still attached to the pastedown, do not detach to attach the new hinge. SEE instruction # 13.

1. Be sure that the original spine lining is firmly adhered to the spine. If any of the lining is loose, remove it to avoid having the weight of the textblock pulling the hinge/lining loose from the spine.

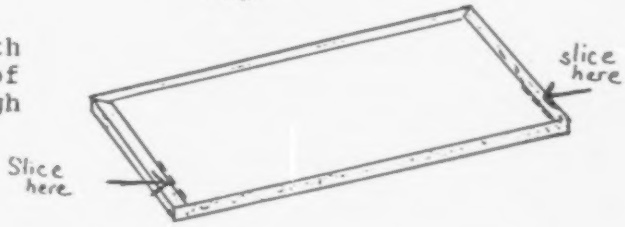


2. If only one hinge is torn, adhere a piece of super to about 1/2inch of the spine and carefully rub the super to the spine so the cloth is well adhered to the spine. The super should extend 1.25 inch beyond the spine.

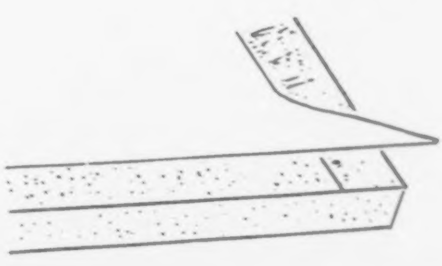
   If both hinges are torn, adhere a piece of super which extends 1.25 inches beyond the spine at both hinges. Adhere the super to the spine, and carefully rub the super to the spine so the cloth is well adhered to the spine.



3. Make a 1.5 inch slit parallel with the pastedown at the spine edges of each board. Be sure to cut through the turn-in into the board.



4. With a knife or thin tool, carefully lift the pastedown and a bit of board from the board underneath. Usually lifting under the original super helps.



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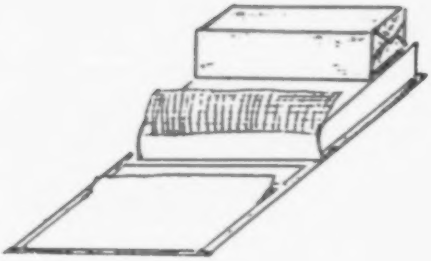
5. Align the textblock in the case using the original pastedowns as positioning guides.

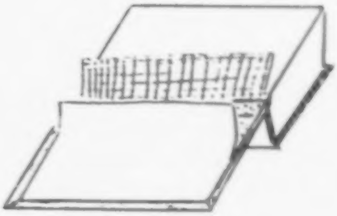
6. Lay the volume lower board up and spine facing you.



7. Carefully open the case and place a weight on the textblock.

8. Apply adhesive to the joint area of the case and to the board side of the lifted area.

9. Carefully but FIRMLY hold the board in position as you adhere the new hinge first to the joint area and edge of the board and then fold the super onto the board. Rub the hinge firmly onto the board and remove any wrinkles.



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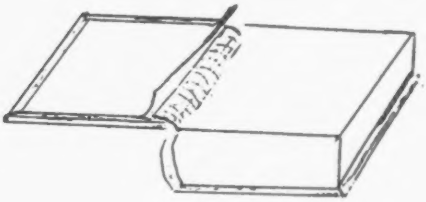
10. Apply a thin coat of adhesive to the lifted pastedown and gently but firmly rub into place. Care must be taken with 19th century and other items whose paper is fragile.

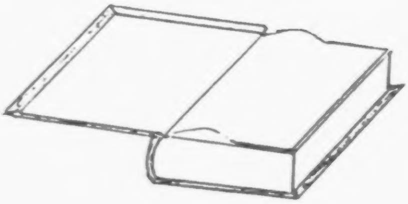


11. Lay a sheet of waxed paper between the text and the board.

12. Attach the other hinge. Insert a sheet of waxed paper between the text and the board and place the volume between weighted pressing boards.

for books with endsheet(s) still attached

13. Apply a thin coat of adhesive to the lifted pastedown and gently, but firmly rub into place. HOld the fore edge of the pastedown flush with the fore edge of the text with one hand while gently pushing the pastedown back into the joint with the other hand. OR Place the spine of the book on the bench and open the newly adhered joint. With one hand gently press the pastedown into the joint, making sure that the fore edge of the pastedown is flush with the fore edge of the text.



Berkeley

REPLACING BROKEN SUPER WITH TYVEK

When the case is in good working order and the sewing structure is intact, but the super attaching textblock to case is broken at one hinge, Tyvek may be used to rejoin textblock to case. In this treatment a strip of Tyvek is inserted over the spine and under the pastedown to bridge the gap.

If both hinges are broken, it is probably preferable to recase the volume with completely new super instead. This treatment is best used for light weight books (under 1.5 pounds)-- the same weight as would permit use of C1 cloth instead of buckram.

PROCEDURE:

1. If needed, lift up the pastedown as far as 1/2 inch from the joint. Clean away mechanically any loose adhesive or paper.

2. Cut Tyvek to the height of the textblock. (Use heavier Tyvek if it will fit, otherwise use light Tyvek.)

3. Cut Tyvek to approximate width. This will be the sum of the distance under the pastedown and about half the width of the spine.

4. With textblock spine facing and board hanging down over bench, adhere the Tyvek strip to the spine with PVA, over the old super. Bone down well.

   (There may be occasions when you might choose to lift part of the old super from the spine and adhere the Tyvek under it. If so, then glue the super back over the Tyvek and proceed as follows.)

5. Turn the book around, fore edge facing, with the board open on the bench. Push the board toward the book and hold it there with weight.

   Fit the Tyvek under the pastedown as far as possible. Fold it where the lifted part stops. Remove Tyvek and trim to exact width with scissors.

6. Apply PVA to the board under the pastedown.

   Insert the Tyvek under the pastedown snugly, on top of the PVA. Rub down well with bone folder.

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7. Apply PVA on top of the Tyvek. Place pastedown over the Tyvek, position flyleaf correctly over textblock and at shoulder.

8. Close cover, pushing board into joint. Rub down joint and place volume in press.

TIGHTEN HINGE

Candidates:

- Condition: Book is loose or leaning in its case. This is often seen in heavier volumes, where the weight of the text block pulls it away from the case. It also occurs in books that have been shelved on their fore-edge or returned in a book drop. If books in this condition can be repaired immediately, it will help prevent a later, more costly repair.

- Criteria: Text may require paper repair or insertion, but method of leaf attachment is intact and case is in good condition; endsheet may be separated from text block, exposing super, but super is not broken.

- Variations: Endsheet replacement may be required if the endsheet is broken; see procedure for endsheet replacement. Do not proceed with the tighten hinge repair if it is necessary to do any repair to the case.

Time to complete repair procedure = 5 minutes. Cost of supplies is negligible.

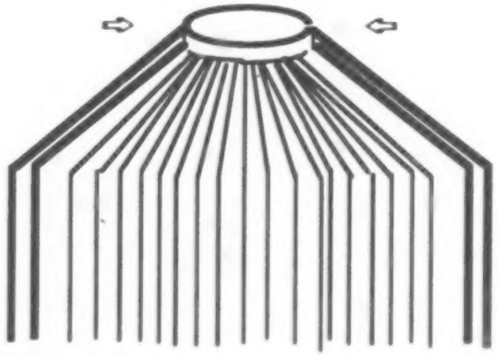
Materials:

knitting needle
bone folder
waxed paper
book press or weights
pressing rods
diluted PVA: 7 parts PVA to 1 part H_20
tall (dishwashing) bottle
small, thin glue brush

Procedure:

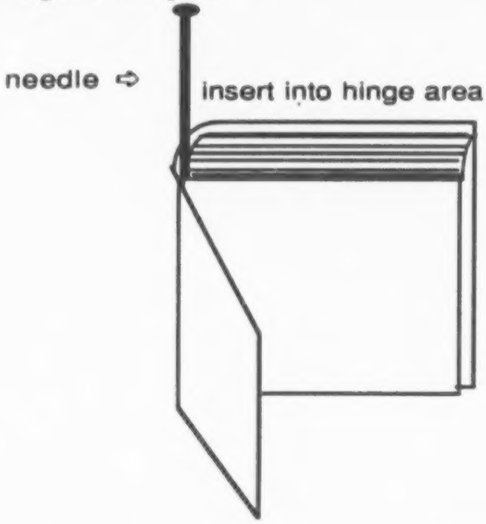
1. First repair any torn pages or loose pages with Japanese tissue mends.

2. Place the book upright on its tail with the fore-edge facing you and fan open the covers. Adjust position (to get maximum exposure to the hinge area) by pulling the textblock away from the case. It is important to position the volume before you begin applying glue.



3. Dip the knitting needle into the glue bottle. To remove excess glue, twirl against the lip as you pull it from the bottle or strain the needle between two fingers. The needle should be coated completely with a light coat of glue; the glue should drip slowly off the end of the needle. Wait until the glue has stopped dripping before proceeding. If the PVA is not dripping, the glue has not been mixed in the right proportion or it has thickened up over time. Add water to achieve the proper consistency.

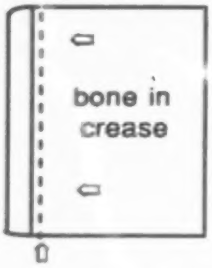
4. Insert the needle into the hinge area between the backbone of the text block and the spine of the case. Be careful not to touch the backbone or spine areas with glue. Avoid placing glue in the hinge until the needle is in position. Once the needle is all the way down into the hinge area, twirl the needle in the hinge to apply the glue. Do not force the needle to go all the way down; it may damage the super, causing further repair.



5. Draw out the needle, checking to be sure that glue does not drip over the sides onto the endsheet or case. Repeat steps 3 through 5 for second hinge, if necessary.

6. Close and place the book flat. Check to see that the endsheet is properly positioned (lined up with the text block). This may require opening the cover slightly and making an adjustment. Make sure the text block itself is squarely positioned within the case.

7. Once the text block & case are properly aligned, bone in the hinge. The bone must always be held in a horizontal position to prevent tearing the bookcloth.



8. Place waxed paper in book between the cover and fly leaf. Place the book in a book press or under weights, using pressing rods in the hinge area. Allow to dry for approximately 15 minutes.

Note:

- When the endsheet has separated from the text block, exposing the super, there is no need to use the knitting needle method. Simply apply glue with a thin brush along the super and 1/8" onto the text block while the book lays open. Then proceed to Steps 6 - 8.

- When the endsheet has begun to separate from the case, apply glue using a small brush and lay the endsheet back in place. This must be done in addition to the application of glue to the hinge area.

11

Tipping In and Hinging In

Tipping pages into a bound volume, i.e. inserting them with a narrow line of adhesive along the gutter margin, is usually the fastest and most economical method to repair loose pages, or to add errata sheets, indices, and the like. Sufficient margin is needed to accommodate the adhesive and to permit all text on the inserted leaves to be read. If there is not sufficient margin, the leaf or leaves may be inserted with a paper hinge.

Hinges may also be used to insert a leaf into a book where the gutter is very tight, or when the item to be inserted is much heavier or stiffer than the surrounding text, or is brittle. A hinge may be used as well when the item to be inserted needs to be well away from the gutter for reading purposes, such as a folded map.

One or more leaves may be tipped in, limited only by the space remaining in the spine and by the expense of tipping in a large number of leaves. If the material to be inserted does not fit, or if it would be too time consuming (and therefore too costly) to tip in the leaves, the volume should be completely rebound. When hinging in new material only one or a few leaves should be added, because of the added thickness created by the hinge(s). If there is thick material to be added then stubbing will be needed, making the job a more complicated and time consuming repair.

Tipping In and Hinging In

Tipping In - Berkeley

Tipping In Procedure for 1 or 2 Leaves - Berkeley

Tipping In Procedure for Multiple Leaves - Berkeley

Hinges: Japanese Tissue - Berkeley

Attaching a "V" Hinge - Ohio State

Tipping In and Hinging - Ohio State and Cincinnati

Hinges: Tyvek Hinges for Oversize Materials - Berkeley

Tipping In a Page - Emory

Hinging In a Page - Emory

Berkeley

TIPPING IN

Errata

Errata slips are issued by the publishers of books to correct errors in their texts. They may be replacement leaves or sections with their appropriate locations indicated, or they may be a single slip that corrects errors on several different pages in the text.

Placement: If the slip has no location indicated, or refers to several locations, place it immediately after the title page.

If the slip belongs at a specific page, place it there.

Errata should be tipped in jogged to the head of the textblock to minimize the entry of dirt into a gap, except that small slips may be located where no information will be obstructed or centered on the page.

Table of Contents

A table of contents lists the contents of the volume in page number order.

Placement: Place immediately following the title page.

Table of Contents for Serials Volumes

A cumulative table of contents for a monographic series or serials set, that includes information for more than one volume.

Placement: Place in the front of the first volume of the series or set.

Index

An index lists the subjects covered in the text, in alphabetical order by subject.

Placement: Place following the last leaf of the text, unless otherwise indicated on the index or binding slip.

Loose or Replacement text leaves

Leaves provided by the library or from another library to substitute for those that have been cut out of the volume, or bound incorrectly.

Placement: Place in page order.

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Maps

Maps are often issued separate from their volumes and must be either hinged in or put in pockets attached to the volume.

Placement: Place in page order or, if no indication of location, after the last text leaf.

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TIPPING IN PROCEDURE FOR 1 OR 2 LEAVES

1. Remove any unnecessary staples, and any cover memos or papers that do not contain information of use to the reader.

2. Place leaf in textblock according to guidelines above. Trim gutter margin or other margins if needed.

3. Brush a narrow line (1/16 - 1/8") of PVA along the gutter margin of the leaf to be tipped-in.

4. Insert leaf so edges are even with textblock.

5. Rub down well with bone folder.

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TIPPING IN PROCEDURE FOR MULTIPLE LEAVES

1. Check that volume can accommodate thickness of tip-ins. If not, change treatment specification to rebind whole volume, or bind item separately as a pamphlet.

2. Remove any unnecessary staples and any cover memos or papers that do not contain information of use to the reader.

3. Place tip ins in textblock according to guidelines above. Make sure all pages are in correct sequence.

4. Check all margins for correct registration of text and for needed trimming.

5. Trim gutter margins as needed.

6. Brush a narrow line (1/16 - 1/8") of PVA along the gutter margin of the leaf to be tipped-in.

7. Insert one leaf so margins are even and sufficiently wide. Usually, line up the leaves with the head of the volume.

8. Rub down well with bone folder.

9. Continue brushing on PVA and inserting leaves in sequence, rubbing well after each leaf. Adhere top leaf to adjacent textblock leaf.

10. Using scissors, trim tip-ins even with textblock at fore-edge and tail margin. Trim only two or three leaves at a time for ease of cutting. Trim head margin if needed.

Alternate procedure: Fan glue all leaves together before inserting them as a group.

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HINGES: JAPANESE TISSUE

Hinges are strips of material tipped to the gutter margin of the leaf to be inserted, and used to extend the width of a leaf or leaves for better flexing of the leaf in the textblock.

Procedure:

1. Use Japanese tissue of the appropriate weight and color for the hinge.

2. Needle tear the hinge strip as narrow as will do the job, and longer than the leaf.

3. Apply 1/16" paste along the gutter margin of the leaf to be hinged. Use Fueki paste diluted to a milky consistency. Lay the hinge on the leaf, on top of a blotter covered with polyester web.

4. Dry with tacking iron through silicone release paper.

5. Trim hinge at head and tail of leaf.

6. Brush a narrow line of PVA on the verso of the hinge and insert the leaf, placing it even with all the edges of the textblock.

7. Close volume and let dry.

Alternate procedure:

Make a folded hinge when there is not enough gutter margin for a regular hinge.

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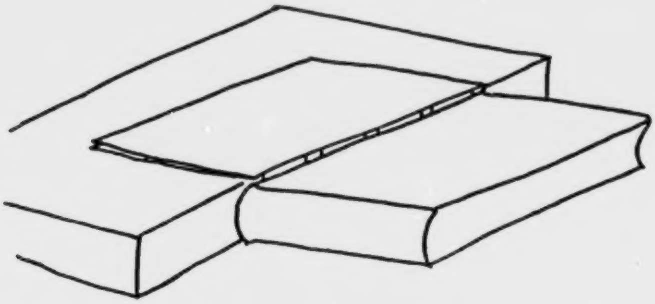
ATTACHING A "V" HINGE

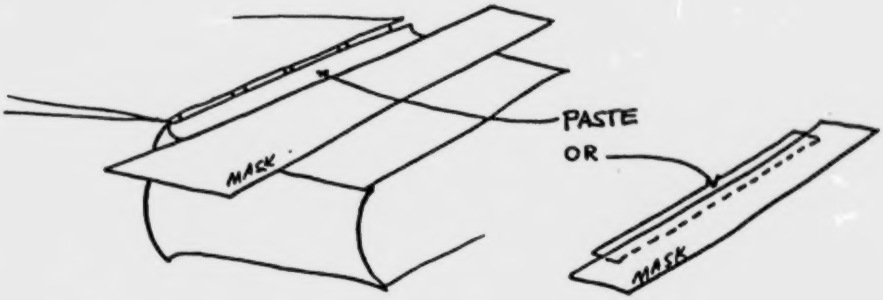
A "V" hinge is used when attaching a new endpaper to a bookblock (one that has the sewing in tact and in good condition) or when consolidating separated parts of the bookblock.

1. Place the book on a flat surface. Open and support the cover (and leaves of the bookblock if necessary) at 180 .



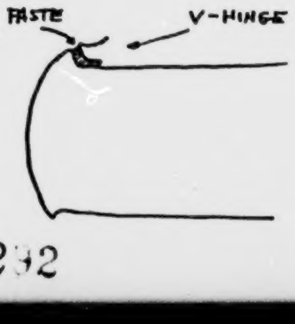
2. Tear a strip of appropriate Japanese tissue 3/8" to ½" wide and slightly longer than the height of the text.

3. Apply a thin coat of paste either to the shoulder of the text or to half the width of the tissue strip.



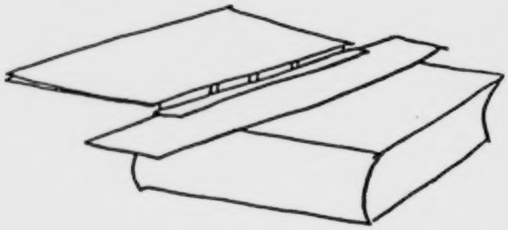
4. Place the tissue on the shoulder, fold it back on itself forming a "V".

   Trim hinge so it is flush at the head and tail of the bookblock.

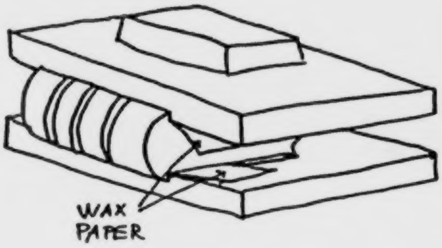


Ohio State

5. Insert a strip of wax paper with waste paper over it inside the V-hinge. Paste the top flap of the hinge. Remove the waste paper but leave the wax paper inside.



6. If a new endpaper is being affixed: Firmly pull the endpaper over the hinge so that its fold is flush with the signature folds. Bone the endpaper so it is well seated into the shoulder. When both endpapers are attached to the bookblock, line the spine, trim the endpapers at the fore edge and reattach the case.



If the V-hinge is to consolidate parts of the bookblock: Bring the adjacent leaves over the hinge so that they meet and match the other leaves of the bookblock at the fore edge. Bone the outer joint of the cover. Place the book in the press for a quick nip and then place it under a weight to dry.

Tipping In and Hinging

Loose pages, plates, errata slips, xeroxes replacing lost, torn or razored out pages, indices and other loose items are attached to the bookblock by either tipping-in or hinging. A tipped in leaf is attached to the adjoining leaf with adhesive, while a leaf that is hinged in has the attachment to the adjoining leaf with a Japanese paper hinge.

Generally, hinging is a better practice because it allows the inserted material to function freely, however a single leaf or an errata slip can be safely attached without a hinge. The difficulty attributed to tipping in is a pull on the next leaf when the tipped leaf is turned (this is commonly referred to as having a "drag" on the adjacent leaf). When poorly done and too much adhesive is applied to the edge of the leaf, the adhesive will spread when the book is closed and loss of text is possible.

It is difficult to specify the exact number of pages that can be inserted at one time because of the varying thickness of paper and one sided replacement xeroxing. A good practice is to observe if the added material puts a strain on the bookblock or binding structure causing it to gap at the foredge. Should this occur, the book can be sent to the commercial binder, or the material can be put in a pocket, or put in a protective cover with suitable call number and shelved next to the book itself.

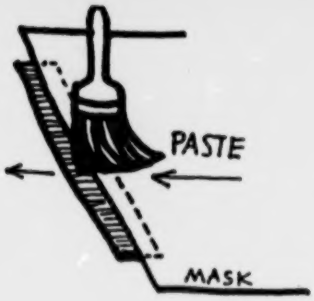
Tipping In

1. Make sure the page to be inserted is no larger than the other pages of the book when closed.
2. Apply a "bead" of PVA mixture or Pritt Stick, no wider than 1/8", along the edge of the page that is being inserted into the gutter.
3. Snug the leaf as deep as possible into the gutter.
4. Insert wax paper on both sides of the tip-in. Close the book and place it under a weight to dry.

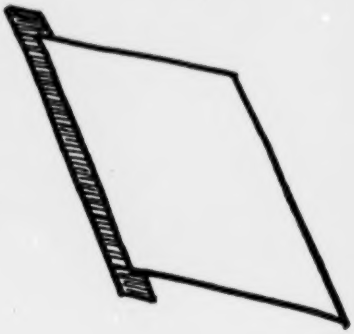
Hinging

1. Cut a strip of Japanese paper that is compatible with the text paper ½" to 3/4" wide. It should be about ½" longer than the height of the leaf. The grain should run the long direction.

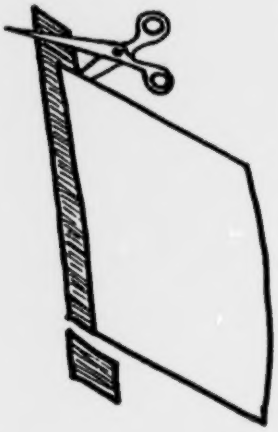
2. Lay the hinge on a piece of waste paper. Mask off ½ of the hinge width with waste paper. Holding the top strip down firmly, brush wheat paste onto the hinge from the waste paper across the hinge and off.



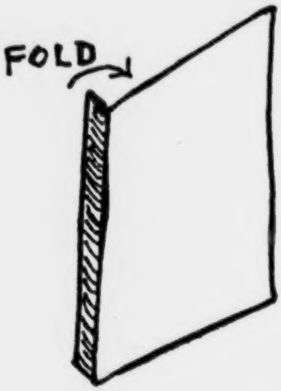
3. Remove the waste paper. Carefully pick up the hinge and place it on clean waste paper. Center the leaf that is being hinged on to part of the hinge that has adhesive on it. Cover with clean waste paper and rub well, moving the waste paper several times to absorb any excess moisture.



4. Put the hinged leaf between clean paper. Let dry under a weight.

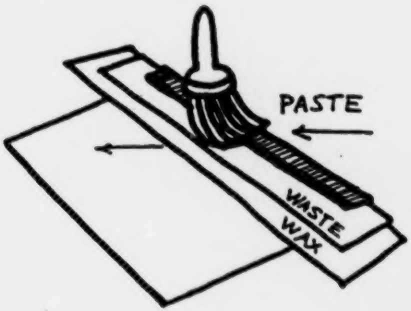


5. Trim hinge to the height of the leaf.

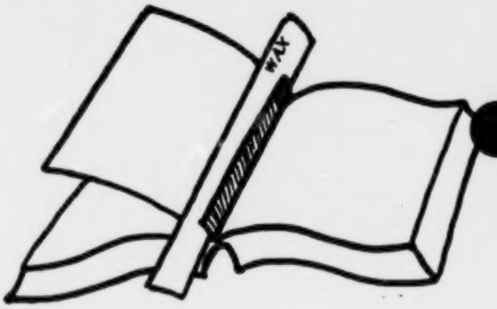


6. Fold the unattached part of the hinge over and bone it down.

7. Insert wax paper with waste paper over it under the hinge. Apply adhesive to the hinge. Remove the waste paper.



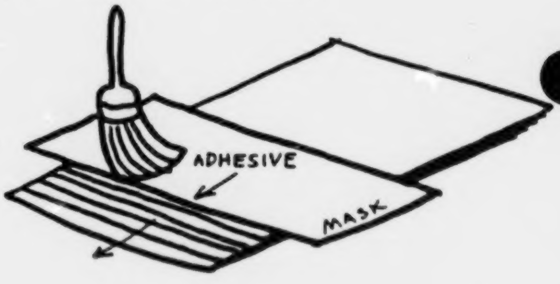
8. Insert the hinged leaf that still has the wax paper between the leaf and the hinge into the gutter. Snug it in as deep as possible making sure it is aligned at the head, tail and foredge.
Leave the wax paper inserted. Close the book and let dry under a light weight.



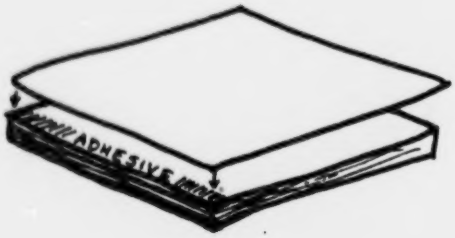
Attaching Multiple Leaves (not in a signature)

At no time are you to insert more than 8 leaves (xerox or text pages). The strain on the binding often creates other problems that are much harder to correct.

1. Fan all the leaves except the first one exposing about 1/16" to 1/8" of each leaf. Place a waste strip 1/8" from the edge of the top leaf and apply PVA mixture to the exposed areas.



2. Remove the waste paper. Jog or separate the leaves so that they become positioned one on top of the other and flush at the spine. Place the first leaf on top and bone all the leaves together.



3. Attach a hinge to the group of joined leaves as described in hinging a single leaf and insert into the book.

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HINGES: TYVEK HINGES FOR OVERSIZE MATERIALS

Tyvek hinges are used to tip-in maps and other oversize materials that must be folded to fit in the textblock.

Materials should be placed where indicated in the textblock. If no location is indicated, place tip-ins after last leaf of the textblock.

Procedure:

1. Cut Tyvek strip.

Cut a 3/4" wide strip of lightweight Tyvek, 1/2" longer than textblock. Have a supply of strips available if needed often. If foldout is small, having only a single extension larger than textblock size, Japanese tissue may be used for a hinge. Otherwise follow procedure below.

2. Examine folded plate.

Determine whether existing folds can be retained or if new folds are needed, according to these guidelines. Decide where to re-fold the plate while it is in place in the textblock. Does it or will it fit into the textblock?

3. Refold.

Refold the piece as close as possible to the textblock size, using the minimum number of folds possible. The folded piece should be 1/16" to 1/8" less than textblock size, and should be placed even with the head, and close to the tail and fore-edge margins.

For very large pieces, fold so that most of the piece extends from the head of the text, rather than the tail. Fold fore-edge extension accordion-style.

3. Trim hinge.

Mark the hinge where the folds will be. Trim the hinge to extend beyond the head and tail folds by 1/4".

4. Glue hinge to fold out and into textblock.

Adhere hinge to verso of foldout with a thin line of PVA. (Unfold foldout first.) Brush a narrow line of PVA on the gutter margin of the hinge. Place the piece into the textblock.

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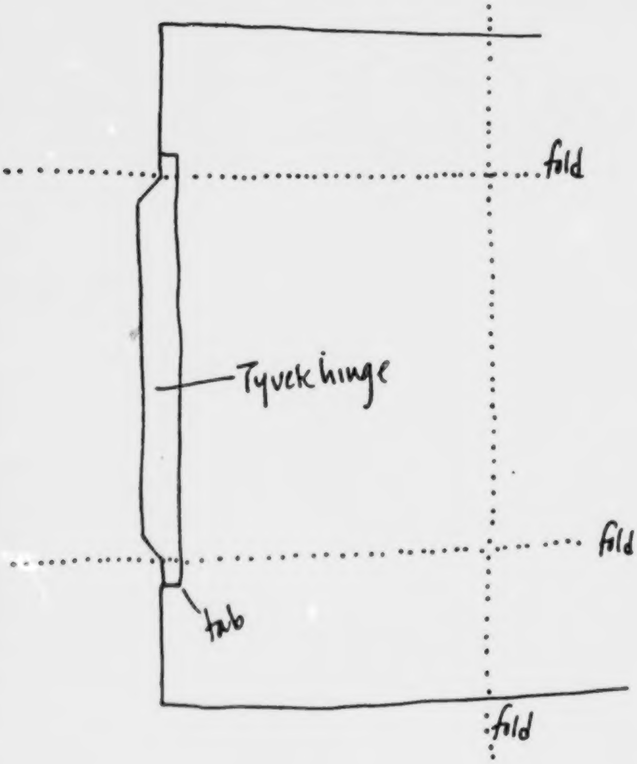
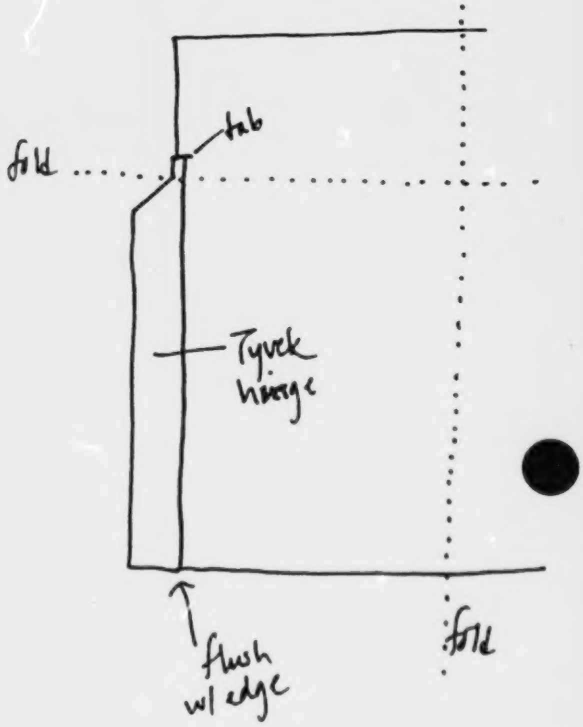
5. Fold up.

Fold piece to size. If needed, recrease folds gently. Place under weight.

6. Quality control.

Check that the hinge sticks well and that the refold is well placed.


fold
Tyvek hinge
fold
tab
fold


tab
fold
Tyvek hinge
flush w/ edge
fold

TIPPING IN A PAGE

Materials:

scrap paper
adhesive (PVA)
glue brush
support boards
weights
scalpel
cutting board
ruler
waxed paper
self-healing mat

Procedure:

1. Make sure work space is clean. Have scrap paper, tools, and other materials organized and within reach.

2. Look for special instructions regarding placement of tipped-in sheet. Is double-sided photocopying necessary ? (see Procedures manual)

3. Open book and support cover with the appropriate size stack of support boards (wooden or scrap binder's boards) in order to avoid stressing the binding and damaging the book.

4. Trim sheet to be tipped-in to exact height of text block.

5. Place page to be tipped face down on a sheet of scrap. Place a second sheet of scrap over the sheet to be tipped, exposing only 3/32 - 1/8" of the edge to be glued.

6. Brush glue onto page gently, stroking away from the top waste sheet. Avoid moving the tipped-in sheet while gluing. The top scrap sheet should be removed in the direction of the glued area. Remove tipped-in sheet in the same manner. Scrap pages should be discarded immediately.

7. Position glued sheet in gutter of textblock. Align top and bottom edges evenly with other leaves of textblock.

8. Place scrap paper over the area tipped and smooth down with a bone folder.

9. Place waxed paper between side tipped and text block.

10. Close book and place weight on top.

11. After adhesive has been allowed to dry completely, page width may be trimmed to size at fore edge:
    - place a piece of scrap board under the tipped-on page to avoid cutting any leaves of the text,
    - place ruler over page to be trimmed, close book, and line up ruler edge with edge of text block,
    - use scalpel to trim excess of tipped-in page along ruler.

HINGING IN A PAGE

Materials:

- scalpel
- bone folder
- thin brush for water-tearing
- paste brush
- Japanese tissue
- ruler
- weights
- support boards
- polyester web
- waxed paper
- adhesive (wheat paste or PVA/paste mixture)
- thin card (length of text for positioning)
- blotter strips
- scrap paper
- water

Note: Paste is generally used in conjunction with Japanese tissue and is the preferred adhesive because it is easily reversible in water. Coated paper does not always adhere to paste, and a stronger adhesive (PVA) may be needed. PVA is not, however, for our purposes, reversible. If an attempt is made to apply Japanese tisssue to a coated or highly calendered paper, the paste should be very dry. Use wheat paste when hinging pages from older texts; use PVA when hinging pages in newer texts; use PVA when hinging in photocopied pages.

Procedure:

1. Make sure work space is clean. Have scrap paper and other materials organized and within easy reach.

2. Look for special instructions regarding placement of hinged-in sheet. Is double-sided photocopying necessary? (See Procedures manual for instructions for Photocopying.)

   If double-sided photocopying is necessary, margins must be properly aligned. A 3/8 - 1/2" margin should appear at the left edge of the photocopied page. This margin will provide a hinge to be inserted into the gutter of the text block in addition to allowing for complete viewing access to the text. Ample room should also appear at the recto right margin so that the photocopied sheet may be neatly trimmed to the width of the other leaves at the foredge.

3. Open book and support cover boards with an equal stack of support boards in order to avoid damaging the binding while it is open.

4. Correctly position photocopied sheet in the text, and mark dimensions for exact height. This may be done by creasing the excess paper of the photocopied sheet over the bulk of the text block. Trim the photocopied sheet to the exact height of the text block. Width will be trimmed after page is inserted and glued.

5. If photocopied sheet is to be inserted without Japanese tissue, create 1/4" hinge from the recto left edge of the photocopied sheet. Use bone folder and ruler to enhance crease. Fold the 1/4" hinge crease under the photocopied sheet to create an "L".

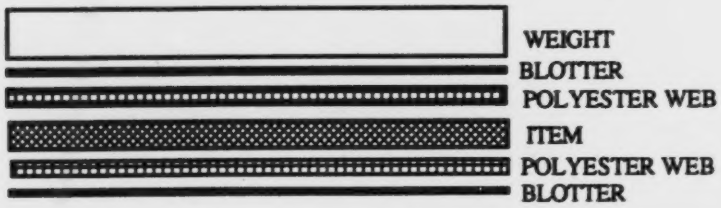
6. If an original page will be reinserted or if there is insufficient margin for a 3/8 - 1/2" hinge on the photocopied sheet, choose a piece of Japanese tissue compatible with the color and texture of the text paper. This piece of tissue should be of an equal or lighter weight, and slightly longer than the text paper to which it will be attached.

7. Using a ruler and brush moistened with water, lightly draw a line on the Japanese tissue to create a strip approximately 5/8" wide. Using both hands, gently pull apart the tissue at the water marks. The fibers of the tissue should be long and feathered.

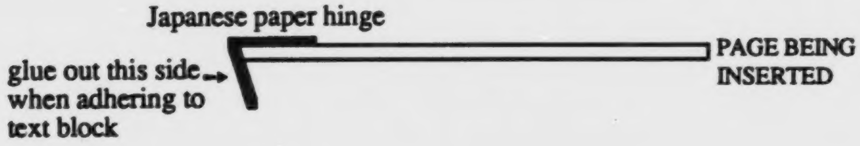
8. Place the tissue on scrap paper. Mask approximately 1/4" with a second sheet of scrap paper. Apply paste to the exposed Japanese tissue, brushing away from the top waste sheet. Remove top scrap sheet in the direction of the glued area.

9. Lift the strip of pasted out tissue carefully. Attach glued portion of the tissue hinge to the original page or photocopied sheet.

10. Weight between polyester web and blotters, and allow to dry.



11. When dry, trim off excess Japanese tissue at head and tail. Fold the unadhered portion of the Japanese tissue **under** the sheet to which it is attached to form a "V".



12. Paste or glue out the hinge, making sure to maintain the fold.

13. Carefully position the sheet on the textblock so that the pasted hinge is facing the side of the textblock to which it will be attached. Using a thin card the length of the textblock, tuck the hinge into the gutter, while maintaining the correct alignment of the page. Use the card to then bring the hinge over onto the adjacent page. Bone down over a piece of scrap paper.

14. Place polyester web and waxed paper over the adhered area, and waxed paper on the back of the page which received the hinge. Allow to dry under weight.

15. After adhesive has been allowed to dry completely, page width may be trimmed to size at fore edge:

- place a piece of scrap board under the hinged page to avoid cutting any leaves of the text,
- place ruler over page to be trimmed, close book, and line up ruler edge with edge of text block,
- use scalpel to trim excess of hinged page along ruler.

12

Textblock Consolidation

Textblock consolidation encompasses a variety of repairs made to the structure of a volume when it is broken in a limited number of places. Examples of partial structural damage include the detachment of the first and/or last section of a sewn volume and breakage of a sewn volume into two or three pieces. Some institutions include the breakdown of adhesive bindings into two or three pieces in this category, if the leaf attachment of the pieces is secure. Methods for textblock consolidation may also be used to insert later additions to the text, such as indices or periodical issues, if the new material will fit into the case. Institutions differ in designating the degree of damage that will be repaired by consolidation, and the degree of structural breakdown that warrants complete rebinding.

Textblock Consolidation

Reattaching a Loose Inner Signature or Disconnected Signatures - Cincinnati

Reattaching an Inner Signature That Is Disconnected - Ohio State

Sewing In a Loose Section or Single Section Added Material - Berkeley

Treatment of Adhesive Bindings - Cincinnati

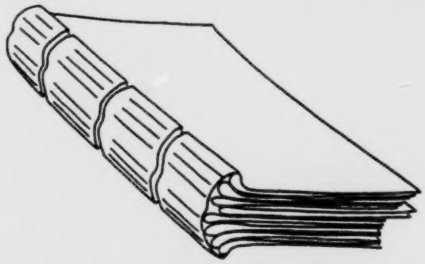
Resewing on Recessed Cords - UC Davis and Washington

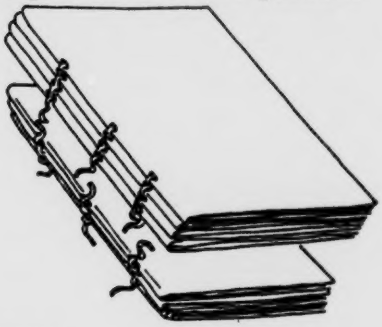
Resewing on Tapes - New-York Historical

REATTACHING LOOSE INNER OR DISCONNECTED SIGNATURES

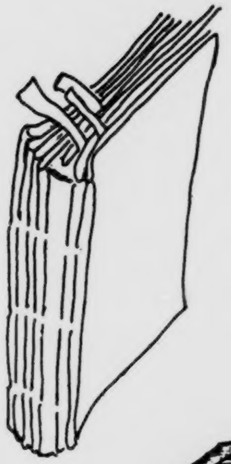
This repair is to reconnect a signature(s) to the text without disbinding and resewing the entire bookblock. Recessed cords in 18th and 19th century books often become weakened or break but the sewing is still intact. The signature(s) moves forward and is visible at the foredge. Modern Smyth-sewn bookblocks can break apart if the original sewing thread was too thin for the weight of the book.

This repair may be done best by a more experienced staff person.



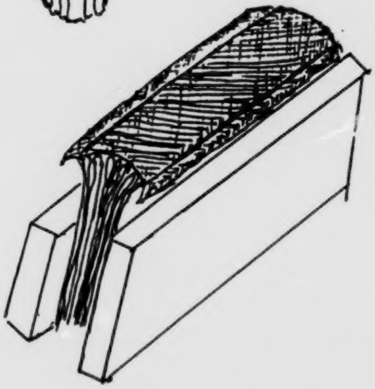


1. Guard any broken or weak folds of signatures.



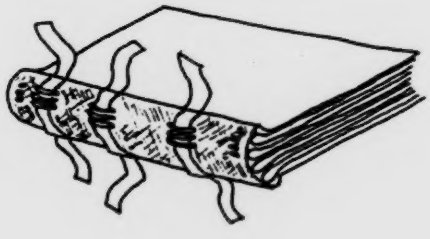
2. To make sewing easier, insert a strip of paper in the center of the signatures being reattached. Reshape the bookblock with the loose signature(s) back in place. Put the BB in a press.

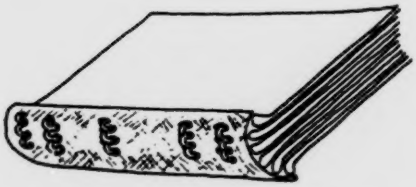
3. Cut a piece of linen on the bias to the height of the bookblock by the width of the spine plus 3".



4. Brush PVA mixture on the spine and center the linen on it. Bone the linen very well so that the folds of the signatures are visible through the linen. Leave the BB in the press until completely dry.

5. Remove the bookblock from the press. There are two ways to sew the signature(s).
   a. When new endpapers are being sewn to the bookblock, space two or three tapes across the spine. Starting back 1 or 2 signatures from the break, sew all along through the linen. Continue sewing past the break 2 to 3 signatures.
      Start back at least one signature when adding the new endpapers.
   b. Link stitch the loose signature(s) through the linen (Morrow/Dyal method). Don't pull the loops too tight otherwise it is difficult to get the needle under the thread.
6. Line the spine and complete casing in.





Berkeley

Sewing in a Loose Section or Single Section Added Material

Purpose: to replace a text section that has come loose from the sewing or to add a new section (e.g., index, periodical issue, etc.)

Requires rest of textblock to be securely sewn and lined, and case to be worth keeping.

PROCEDURE:

1. Insert loose section where it will be placed.

   If adding additional material check to see that it fits without straining the case or textblock. If section does NOT fit, use a different technique, e.g., pamphlet bind it separately, order a phase box for book and section, or have book and section rebound together.

2. Cut through pastedown 1/16" beyond edge of super on back board.

3. Lift super from board.

4. Place section as deep into gutter as possible, using a ruler to help seat the section. Jog section even with all edges. If larger than textblock jog section flush with either head or tail, depending on available margins.

5. Sew section into textblock. Start sewing at section above loose section, sewing all along. Sew in the loose section, linking stitches with the prior section, then sew the subsequent section, also linking stitches.

6. Seal sewing holes on spine with PVA.

7. Glue up lifted super and corresponding board with PVA. (Keep PVA a hairline away from cut edge.)

8. With board open, re-place super from where it was lifted, matching the cut edges. Put silicone release paper into hinge. Put into press for one hour.

9. Trim section as needed with scissors or Kutrimmer.

UC Berkeley
Technician Training Project
5/91

TREATMENT OF ADHESIVE BINDINGS

Adhesive binding is a method of securing single leaves into a solid text block with adhesive rather than with sewing. It works well for books such as telephone books, catalogs and paperbacks. However, adhesive binding is considered to be inferior to sewn binding.

How successful an adhesive binding is depends on the type of synthetic adhesive used and the stiffness of the paper. Three elements that contribute to the failure of adhesive bindings are cheap adhesive that lose their elasticity, paper that is coated or too stiff, and/or when the paper grain direction is horizontal rather than vertical.

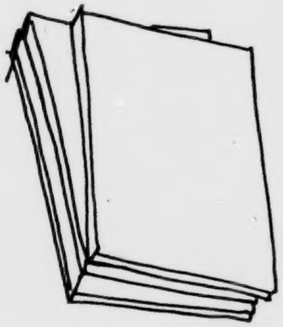
Adhesive bound books appear with increasing frequency in libraries. Problems that arise with adhesive bindings can be taken care of in several ways. When the library's commercial binding budget permits, a type of mylar binding can be made. Art books, or similar large books in hard covers present their own problem because the adhesive often does not hold to heavy coated paper. Leaves fall out or the text breaks into sections. If the inner margins are wide enough the text can be side sewn before casing in. As a last resort, oversewing or notched binding can be done, but narrow margins and illustrations that bleed into the gutter must be taken into account.

When treated in-house, paperbacks that are new or in good condition can have the covers stiffened. Adhesive bound text blocks that have broken apart in sections can be repaired but the results can be somewhat iffy.

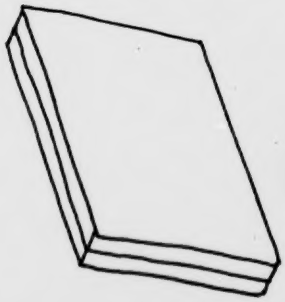
To Consolidate the Text Block

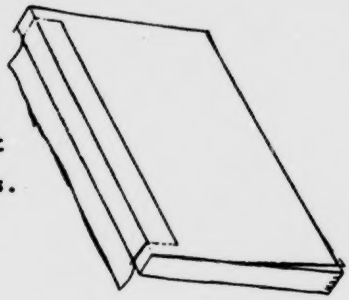
For a Paperback

1. Tip each part of the text to the next with a thin line of PVA on the spine side. Make sure the spine, head and tail are lined up. Carefully tip on endpapers front and back.

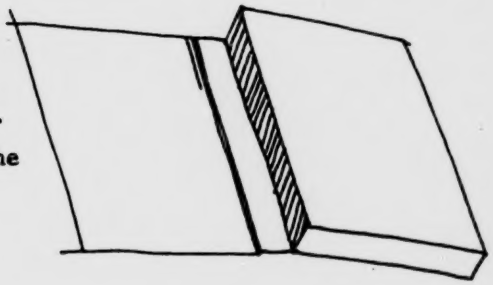


2. Place a piece of binders board wrapped with waxed paper on each side of the text and put it under a heavy weight. The spine should be slightly off the edge of the work bench.





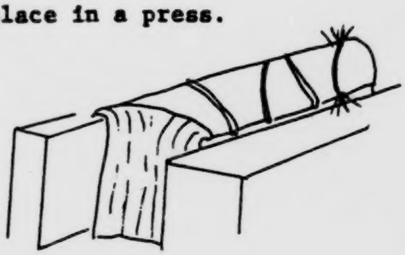
3. Coat the spine with PVA two times. When the first coat is dry, ease off the boards and put the text in a press. Put a paper lining on the spine. The lining should extend beyond the spine about ¼" to ½".



4. Remove from the press. Apply PVA to the spine again and the extension. Put the cover back on. Bone the cover tightly onto the spine and let the book dry under a weight overnight.

For a Rounded and Backed Text

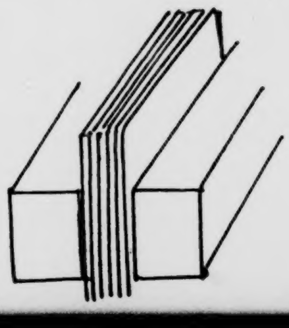
1. Ligntly tip the sections together. Shape text and place in a press.
2. With a small, fine tooth, narrow bladed saw cut channels obliquely across the spine deep enough to sink sewing thread (about No. 18)



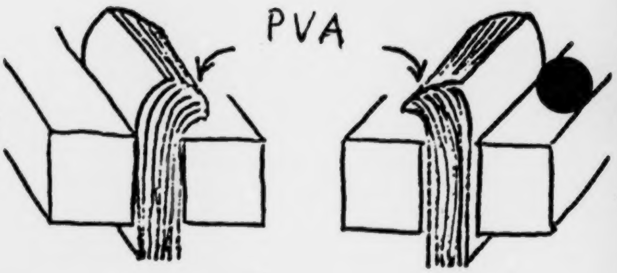
3. Brush PVA into channels and sink thread. Let dry.
4. Remove text from the press. Tip on endpapers. Fray out thread. Return text block to the press and apply another coat of PVA. Line spine with mull and paper lining.
5. Either case into the original cover or make a new case.

Double Fanning the Spine of a Text Block

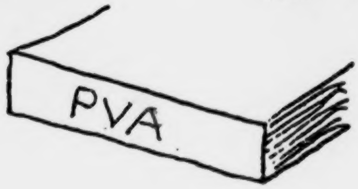
1. Double fanning is done when all leaves are completely separated. Remove any old bits of adhesive from the spine. If necessary, trim the spine edge before proceeding.
2. Jog the text so that the spine, head, tail and foredge are lined up. Place in a press with the foredge at the bottom.



3. Bend leaves over in one direction with about 1/16" of each leaf exposed. Apply PVA. Bend the leaves in the other direction and apply PVA to spine edges.



4. Bring all leaves up into a vertical position. Carefully remove from the press and place between binders board wrapped in waxed paper. Put under a heavy weight until the leaves are consolidated and dry.



5. If the adhesive has not held and the text has broken into sections, tip each to the next with a thin line of PVA. Cut channels obliquely across the spine deep enough to sink thread. The spine can be manipulated by hand or gently with a hammer to make a shallow round. Sink thread, tip on endpapers, line spine and case in.

References:

Greenfield. Jane, Books Their Care & Repair (New York: H.W. Wilson Company, 1983), 156-158.

Johnson Arthur W., The Thames and Hudson Manual of Bookbinding (New York: Thames and Hudson, Inc.), p. 201-202.

Wendy Jones, University of California, Davis
Kate Leonard, University of Washington, Seattle

RESEWING ON RECESSED CORDS

REFERENCES:

According to Lawrence Town, (Bookbinding by Hand N.Y. : Pitman, 1950), a combination of circumstances may have conspired to produce this type of binding. A method had to be found to prevent calf from coming into contact with the glued up back of the book to prevent staining. This led to the hollow back, which cannot be placed over a set of raised bands. Making a saw cut in the backs of the sections allow the cords to sink below the level of the book back and give a level surface. Additional "throw up" in the center of the books was considered desirable by some. Sawing-in the cords is considered by many craftsmen to be a degenerate form of binding and apt to damage the backs of the sections.

Joseph Zaehnsdorf in The Art of Bookbinding (London: G. Bell & Sons, 1897) calls sewing on recessed cords "Ordinary Sewing" as it was the standard of the time. The major advantages are the speed with which one can sew, and that the back can "be better gilt." Books sewn in the ordinary method are made with a hollow back. The cord used must fit into the saw cut. The sewing thread is passed over the cord, not round it.

Middleton, in The Restoration of Leather Bindings, (Chicago: ALA, 1972), states that recessed-cord sewing started in Europe at the end of the sixteenth century, mainly in cheap retail binding. Sewing on recessed-cords was faster and cheaper. Books printed on stiff paper open more easily with recessed cords. Thinner cords must be used, resulting in some loss of durability and some weakening of the backbone as a result of the saw cuts. Middleton feels that this weakening is often overemphasized.

Douglas Cockerell (Bookbinding & the Care of Books N.Y.: Pentalic, 1978 reprint) discourages the use of recessed-cord sewing when the saw cut enters the sections too deeply, allowing adhesive to seep into the cuts and stiffen the spine. Likewise, Edith Diehl (Bookbinding: Its Background and Techniques N.Y.: Rinehart, 1946) criticizes it as "less strong" than flexible sewing, though advantageously fast and easy.

In Craft of Bookbinding (Newton Abbot: David & Charles, 1975), Eric Burdett describes recessed-cord sewing as a viable option when done carefully, and with thin thread which does not require a deep saw kerf. Burdett and Arthur Johnson (Bookbinding London: Thames and Hudson, 1978) each describe and illustrate the sewing procedure. As cited in Bookbinding and the Conservation of Books (Washington: Library of Congress, 1982) the advantages of recessed-cord sewing can be speed of sewing and simplified spine treatment, and that it allows more throw-up in the spine when used with a hollow tube.

UC Davis + Washington

CURRENT USE:

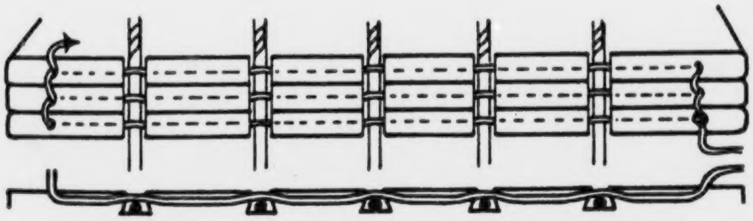
Some Conservation Labs use this method when restoring a book which was originally sewn on recessed cords as is the case with many 19th Century publishers case bindings. Repeating the existing sewing method allows the restorer to retain the movement and feel of the original. Despite its weakness relative to flexible sewing, recessed-cord sewing is adequately strong for many of the volumes for which it was used. There are many ways to reattach the sewn text block to the case, including split boards, hollow tubes, and lifting the endsheets (this is often difficult with the characteristic clay-coated endsheets). It can be used in combination with rebacking when the spine is badly damaged.

PREPARATION FOR RESEWING:

Remove the text block from its case, being careful not to damage components--such as endsheets and pastedowns--which are to be re-used. Clean any fragments of super and dried adhesive from the spine. For a book sewn on recessed cords, open each section in turn to the middle, cut the threads on the inside, and carefully pull the section away from the adjoining sections. Remove all old thread from the book before any resewing begins to reduce the chance of extra swelling. If the book has been rounded and backed, the shoulders must be flattened by careful manipulation with the fingers and careful hammering with a backing hammer. Guard any torn signatures before sewing.

RESEWING:

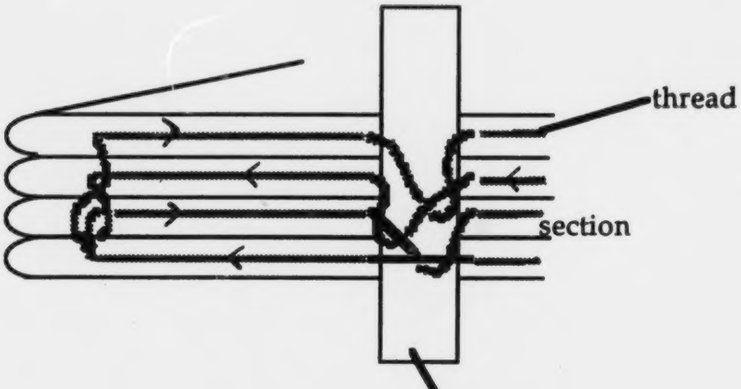
On a sewing frame, set up the cords to match the original sawn-in locations. There is little difference in this method of sewing from that used with tapes. Enter the first section with the needle at the head kettle station and come out at the next saw cut nearest the head of the section. Do not allow the needle to catch or go through the cord. Re-enter the section with the needle on the other side of the cord, so that the stitch passes across the back of the cord. Continue down the length of the section as shown in the diagram. Proceed with each section in the same manner, using kettle stitches at each end. Complete sewing the last section with a double kettle stitch. Remove the sewn book from the frame. Take out the keys, and cut the cords to about 3" on each side. Fray these slips, removing all coarse fibers. The text block is now ready for rounding and backing.



NJ: Historical

Resewing on Tapes

Large volumes, more than 1 1/2" thick, or heavy text blocks where the sewing structure has completely broken down, can be resewn on woven linen tapes. New sewing stations need not be made. Usually through-the-fold machine-sewn books will have numerous sewing stations; choose appropriately spaced stations and use those.



Illustrated is a link stitch. Johnson describes it as "french sewing with tapes". This pattern is done throughout the entire textblock--not just the first and last few sections.

Brudett, Eric. The Craft of Bookbinding. West Vancouver, B.C.: Douglas, David & Charles, 1975, pp.77-78.

Johnson, Arthur W. The Thames & Hudson Manual of Bookbinding. London: Thames & Hudson Ltd, 1981; p.66, "tape sewing for case and library work sewing pattern; also use "french sewing with tapes.

13

Spine Lining and Hollow Spine Lining

The section discusses technical issues to be considered when lining book spines for support of the textblock, and several methods of using paper tubes ("hollow tubes") as spine linings to reattach textblocks to cases.

313

Spine Lining and Hollow Spine Lining

- Notes on Spine Lining - Berkeley
- Lining the Spine - Ohio State
- Hollow Tube - Cincinnati and Ohio State
- Hollow Tubular Back - UC Davis
- Hinged Tube - Ohio State

Berkeley

Notes on spine lining

When deciding how many layers of lining to put on a book spine, and what kind of linings, keep in mind the desired resulting textblock performance. Two goals that must be balanced are flexibility and rigidity.

Flexibility enables the book to rest in an open position easily. It permits the book to be read and photocopied without damage, and it allows reading of text in narrow gutters. Flexibility of the spine can be achieved by sewing through the fold or double fan adhesive binding, and by using the minimal lining (just PVA and super).

Rigidity protects the book from sagging while shelved upright and holds the leaves together while being used. Rigidity in the spine can be achieved through styles of sewing like oversewing, and whipstitching, and by applying heavy lining materials or multiple layers of lining.

Several features of the book must be considered when determining the degree of flexibility and rigidity needed:

- the ability of the text paper to assume an arch ("drapability")
- the condition of the spine, including the type of original sewing (supported or unsupported), whether it has a flat back or rounded and backed, and the presence of serious breaks
- weight of textblock (size, thickness)

* * * * *

In CTD we can use some rules of thumb in applying linings to preps. If a heavy book has a flat back, unsupported sewing, and flexible paper, a second lining of Mohawk is recommended to increase the rigidity of the spine.

If a heavy textblock has serious breaks extra tapes may be desirable, and on some occasions a second paper lining as well. Tapes will help bridge the breaks, inhibiting preferential opening. A second lining layer further reduces openability, and distributes the stress to the leaves of the text, away from the spine.

A heavy textblock of woody, stiff plates may require maximum flexibility in the spine to compensate for the inability of the leaves to arch. No second lining should be added, since too rigid a spine might cause damage to the textblock when it is used.

A book that is whipstitched or oversewn should have a second lining because the spine is not meant to flex.

Other situations must be considered individually.

* * * * *

Berkeley
4/92

Berkeley

en adding paper linings, better adhesion and performance may be achieved y:

- dampening the paper lining before gluing down
- pounding the lining to the spine
- sometimes a lighter lining paper may be preferable (maybe a Japanese paper)

316

Ohio State

LINING THE SPINE

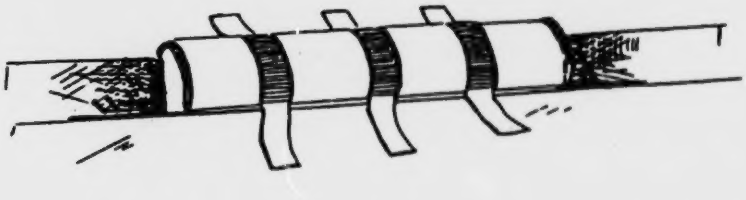
The purpose of lining the spine is to support it and give a degree of rigidity, while still maintaining the necessary flexibility for proper opening. How much a spine is lined and with what materials depends on the type of book and repair being made.

When making Spine Repairs

1. Clean the spine.
2. Cut the lining using Mohawk or Permalife paper. Cut it the width of the spine by the height of the bookblock. The grain direction is from head to tail.
3. Put the book in a lying press. Apply a thin, even coat of PVA mixture on the spine. Position the cut lining on the spine and rub it very well through waste paper or wax paper.
4. Continue with the next step of the repair.

When Rebacking a Book or Making a New Case

1. Clean the spine. The bookblock must be in a lying press.
2. Cut the first lining from Hosho, a heavy, soft Japanese tissue, and put it down with wheat paste. Rub it well through waste paper or wax paper.
    a. If new tapes have been put across the spine so that new endpapers and/or guarded signatures can be sewn to the bookbook, affix the Hosho between the endband and first tape, between the first tape and second tape, and so on. This insures that the spine will be level.



3. Cut the second lining from Mohawk or Permalife and put it down with PVA mixture. This lining should cover the endbands and be cut off flush at the top of each.

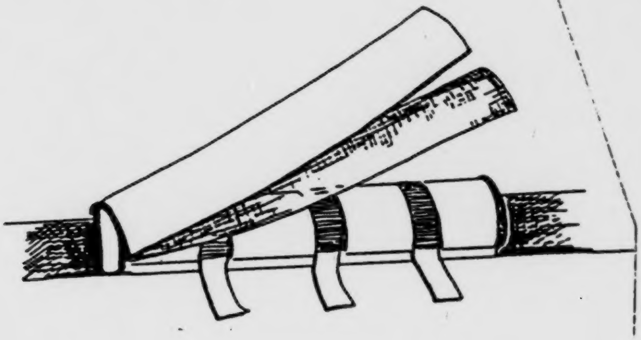
Ohio State

When working on Unusual Books (such as pre-1850, books with fragile paper, very thick and/or oversize books)

1-2 Same steps as for Rebacking or New Case.

3. Cut a second lining from lawn or airplane linen. Apply paste (a little PVA can be added to the paste) to the entire spine. Position the cloth on the spine and rub down firmly. Let dry thoroughly.

4. Cut the third lining from Mohawk or Permalife. Apply PVW mixture to the lining and lay it on top of the cloth lining. Rub down firmly and let dry. It is important that this lining be added only when the second lining is completely dry otherwise the paper will dry first allowing the cloth to be lifted off the spine.

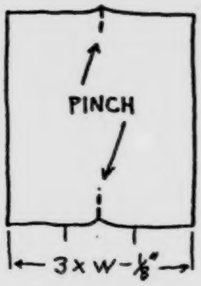


Hollow Tube

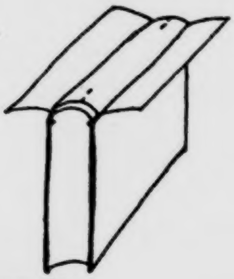
A hollow tube is a flexible layered spine lining which allows the cover to be more securely attached to the text and still function like a hollow back binding (as in case binding). It is made of a single sheet of paper the length of the spine and wide enough to be folded over itself several times across the width of the text spine. The outer-most layers are adhered to the text spine and to the inside of the cover spine, and the inner facing layers are not adhered -- leaving a hollow space between the text spine and the cover.

Hollow tubes are used in fine binding to provide more flexible opening than a tight back leather binding allows, and so that the leather spine decoration is less vulnerable to distortion upon opening the book. In general collections hollow tubes may be used in case bindings to give added strength to the spine lining and cover-to-text attachment -- especially for large or heavy books.

1. Cut a piece of heavy acid-free paper to the height of the bookblock spine by three times the width of the spine minus 1/8". The grain of the paper must run parallel to the spine. Make small creases at top and bottom to mark the middle.



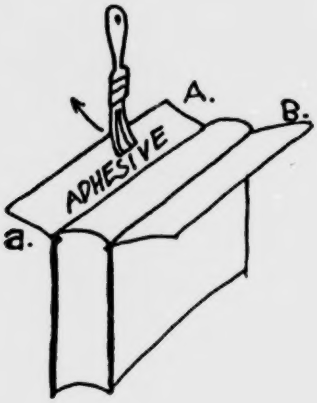
2. Use a pencil to mark the center of the spine at the head and tail of the bookblock.
3. Apply adhesive to the spine. Center the acid-free paper on the spine matching the creases with the pencil marks. Rub down well.
4. Fold over and crease each extending flap along the spine edges of the bookblock.

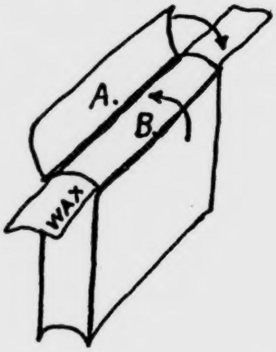


U. Cincinnati & Ohio State University

5. Apply adhesive to flap A.

6. Fold flap B over a strip of waxed paper and press flap A on top of flap B. Rub down well with a bone folder. Move the waxed paper strip back and forth several times to make sure that the inside of the tube does not stick together. Do not remove waxed paper from the inside of the tube until completely finished with the book. Set bookblock aside.





7. It should be noted that a tube can be constructed off the book and then affixed to the spine. A tube can also be lined with linen to give added support. However, such a tube is generally reserved for Special Collections or unusual books.

(See Kyle: Library Materials Preservation Manual, p. 79-80)

UC Davis

THE HOLLOW TUBULAR BACK

The hollow tubular back is used primarily for heavy books over 1" wide and with a case sufficiently durable for recasing. Books rounded and backed, and glued up with hot glue are best for this procedure. Do not use with flat back adhesive bindings. The hollow tubular back can also be used in conjunction with rebacking. The HTB consists of two sections: the book block and its spine liner, and the book case and its hollow tubular back. The two parts are glued together to create a stronger structure than that found in the original case binding. Two layers of paper are used on each side of the hollow to create what is called "two on two."

Follow the essential rules found in all good conservation practice. Use material best suited to the function and adhesive most compatible with the original.

Materials:
Wheat paste, methyl cellulose, PVA
OKO paper or acid-free lining paper
Bone folder
Wooden scraper or oyster knife
Scalpel or other sharp blade
"Water" brush
Straight edge

Procedures:

The backbone of the book must be completely cleaned of paper, cloth and all but residual glue.

Place the book in a lying press or under a brick weight and carefully peel all loose paper and cloth away from the backbone, being careful not to pull a binding thread. Apply wet wheat paste or methyl cellulose in a thick layer to any remaining materials. Let soak in at least 10 minutes and then remove any debris with a wooden tool or oyster knife (very carefully!). Repeat this process until the backbone is clean. Brush a thin layer of wheat paste as a barrier onto the cleaned spine and let dry.
The successful preparation of the hollow tubular back depends of accurate measurement and cutting.

HOLLOW TUBULAR BACK:

Measure the width of the spine, shoulder-to-shoulder ("W") by using a scrap of paper and nicking it at the widest measurements on each side of the spine. Fold down the outer edges of the paper to clearly show the exact measurement. (Fig.1)

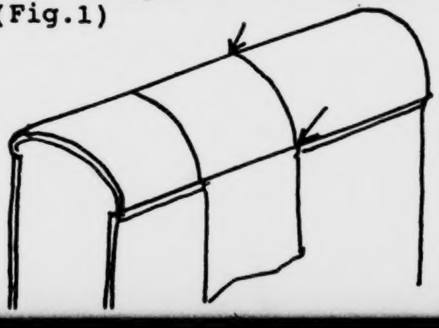


Fig. 1

Davis

Cut a piece of OKO paper roughly 3 1/2 times the shoulder-to-shoulder measurement. Make sure either the top or bottom edge is straight and that the grain is vertical. Center the paper with the "W" measurement on the OKO paper and transfer the measurement with a small incision in the paper. (Fig.2) Duplicate this measurement by gently folding the OKO so the top edge and bottom edge meet and making an incision in the same spots. (Fig.3) Using a straight edge and bone folder, score along this line on the grain, and fold. Repeat with the other side, this time folding in the opposite direction to create a zig-zag. (Fig.4)

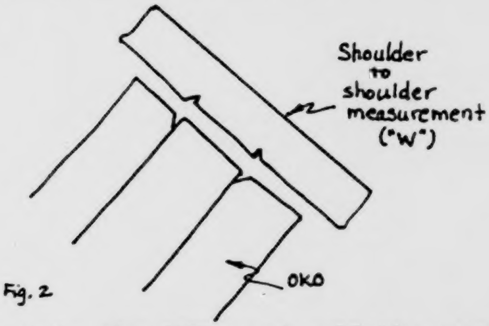


Fig. 2

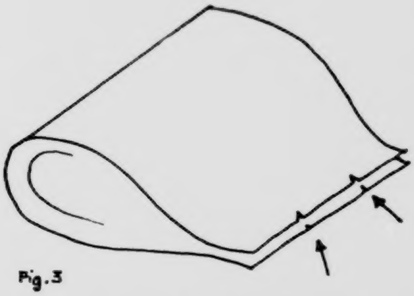


Fig. 3

To trim the HTB, cut off the excess paper beyond the crease on each side. With skill, this removal of paper may be accomplished without the straight edge; use the crease itself as the guide to cut the paper below. Be sure not to cut into the creases.

Fold into a tube and glue by inserting a piece of waste paper in one of the folds and apply adhesive. Remove the waste paper and fold the unglued flap onto the glued flap. Brush down firmly. (Fig.5) Cut the HTB 2 mm. less than the height of the spine. Slit the folds of the HTB from each corner along the fold towards the center for a length equal to the fold-in of the board covering.

Cut across the single-layer side of the HTB at each end so that when centered on the backbone, each end of this liner will be 2 mm. shorter than the backbone.

Insert waste paper shields in the ends of the HTB. Glue up the double-layered side of the HTB. Remove waste paper. Insert the glued side of the HTB under the spine turn-in at the head of the case. Repeat at the tail. Brush down firmly from the center towards the ends. Let dry.

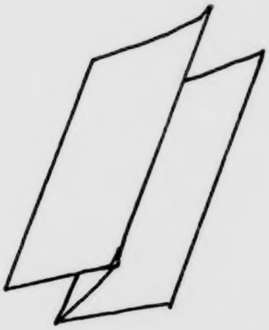


Fig. 4

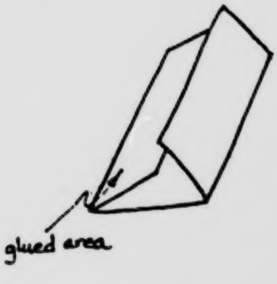


Fig. 5

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BACKBONE LINER:

Prepare another piece of OKO paper approximately 1 1/2 times the "W" measurement with the vertical grain the length of the book. Center the "W" measurement onto this paper and transfer the dimensions onto the OKO with an incision. Duplicate these marks on the opposite end of the paper by folding without creasing. Place the straightedge between the incisions, vertically, and score gently with the bone folder. With a wet pointed brush, place a line of water in the crease and score gently again. A dark line will show through when ready. Ease the excess paper away. You will have feathered edges on both long sides. Cut the length 4 mm. less than the book height.

To apply, lightly dampen one side of the liner, and apply glue to the other. Center on the backbone and rub down firmly through waxed paper or Reemay. Curve all feathered edges around the shoulders of the book block. Let dry.

FINAL PREPARATION OF THE HTB:

Insert waste paper shields in the ends of the HTB. Glue up the book case through the OKO tube and up to the book boards. Remove waste paper. Center the book over the case and accurately re-insert the book in its case--aligning squares and joints. Once the two layers of OKO paper are in contact it is very difficult to adjust, so accuracy is essential. Rub the spine thoroughly to create adhesion between the two layers of OKO.

Wrap the book head-to-tail with two wraps of surgical elastic bandage, then continue around the book spine-to-fore-edge until the end of the bandage. Let set for 5 minutes, then remove bandage and place book in a press between brass edged boards until dry.

Wendy Jones, Conservation Treatment Supervisor, Shields Library, University of California, Davis.

Source for basic procedures: Robert L. Lucas, An Essay on Tubular Hollow backs, A Principal Book Repair Method, S.F., 1981.

HINGED TUBE

This technique is used for reattaching new publisher's case bindings that have failed at one or both hinges. Often these include Asian and Middle Eastern books with inadequate spine linings and poorly fitted covers, as well as large heavy reference and art books likely to fail prematurely at the hinges.

Advantages:

- fast (under 1/2 hour), strong, and flexible;
- allows for sturdy reattachment of poorly fitted covers -- where hinge repairs are often tricky;
- no new endpapers -- printed endpapers can be saved;
- no lifting of pastedowns;
- can be used wherever the hinge is split -- inside cover, between fly and text;
- original covers can be reused -- no relabeling required;
- any sturdy acid free paper can be used.

PROCEDURE

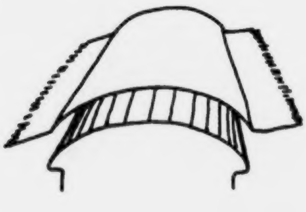
note: A strong adhesive is required -- use PVA for all steps, except for final attachment of the hinges, where paste may be used.
Use any sturdy machine-made paper or hand-made tissue for the tube/hinges.

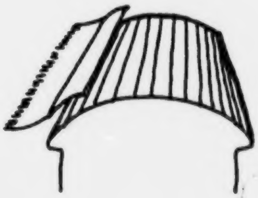
1. If both hinges are broken, remove cover. If only one hinge is broken, swing the cover out of the way to expose spine. If one or both hinges are partially damaged, with the mull torn only part of the length, carefully cut open the hinge the rest of the way.

2. Place the text block in a lying press, and gently scrape away any loose lining materials

3. If you are repairing both hinges cut a strip of lining paper (an additional shoulder-to-shoulder cloth lining is optional -- before the paper lining) the height of the text and 1/2" to 1" wider than the spine, depending on how wide you want the hinges to be. The lining strip should be made of the same paper as the tube will be.

If you are repairing only one hinge, cut the strip wide enough that half the width of the strip will be the hinge, and half will be glued to the spine.

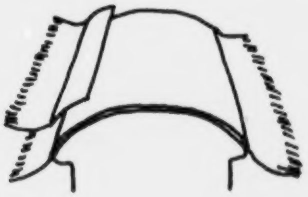




4. "Soften" the outside edges of the hinges by sanding, paring, or other means of feathering the edges.

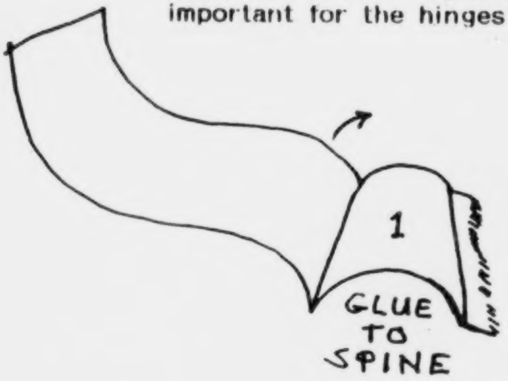
5. Glue up the spine with PVA and attach the strip of paper with the hinge(s) extending beyond the shoulder(s).

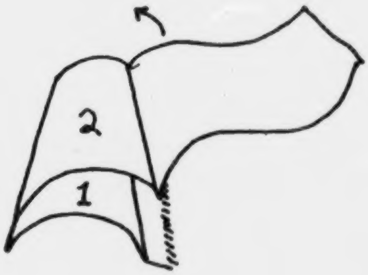
6. If repairing both hinges, attach a second narrow strip along one shoulder, creating on overlapping hinge on that side of the text.

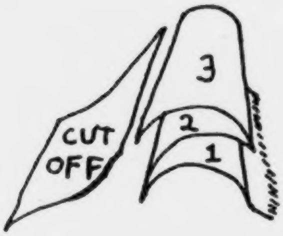


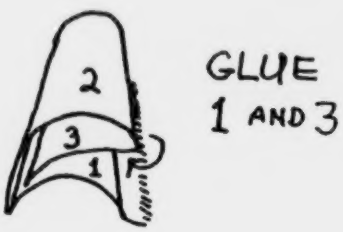
7. Working on the spine, create a "2 on - 1 off" hollow tube, modified to include a loose hinge which will overlap the existing single hinge. It is the first layer of the tube that incorporates this hinge. Be sure to feather the hinge edge before attaching the tube to the spine.

By making the tube on the spine, the folds of the tube can be matched perfectly to the edges of the shoulders. For this repair, precision is important for the hinges to work well.









8. Rub the tube down well, and let it set for just a few minutes.

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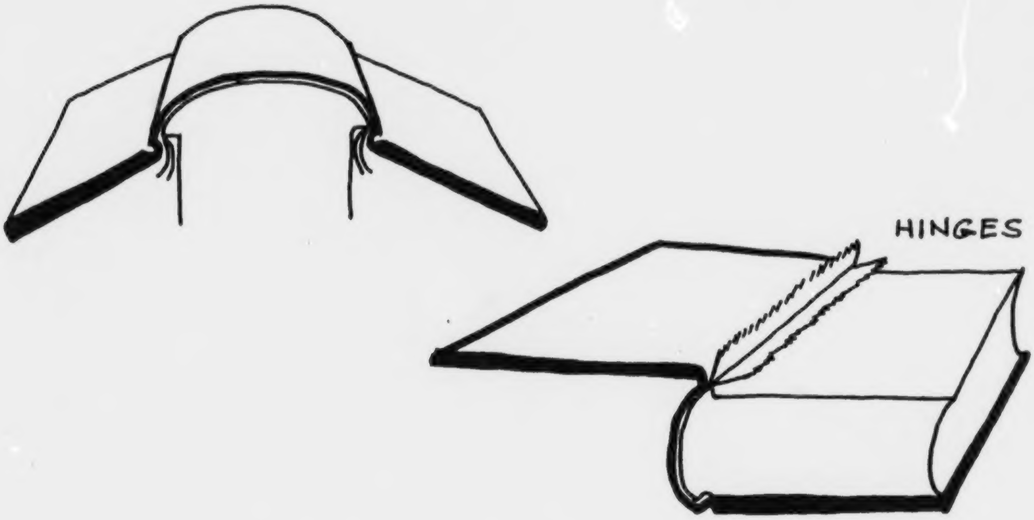
9. Glue up the outside layer of the tube, being careful not to spread glue on the hinges. Remove the text block from the press and place it into its cover, aligning the cover as it was originally placed on the text.

10. Place the book back in the press and rub down the spine. It is important that the spine of the cover is in full contact with the tube, and that it is rubbed down well.



11. After several minutes, remove the book again, open carefully to the loose hinges and glue down the hinges, one at a time, using waste paper to mask the text while gluing. Insert release paper and nip the book quickly after each hinge is attached. When all hinges are attached, insert release paper and leave under moderate weight to dry.

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14

Rebacking and Case Repair

The section includes methods of repairing the damaged case of a book when it is desirable to retain that case in the collection. Conditions that may initiate rebacking include damaged joints and/or damaged headcap or tailcap. In the typical rebacking new cloth is applied to the spine over the boards while the case is on the book. Sometimes the original stamped spine strip is mounted on the new spine.

Institutions differ in specifying the degree of case damage that will be repaired and in determining when case replacement is warranted. In some institutions whole categories of case bindings, such as 19th century publishers' cloth cases, may be rebacked in order to retain potential artifactual information. In others, where the intellectual content of the text is considered paramount for general collection material, case repair or rebacking may not be a common treatment, and application of new cases is the more usual repair. As usual, issues of productivity, unit cost and collection development policies apply when making these decisions.

Rebacking and Case Repair

Spine Repair - Ohio State and Cincinnati

Rebacking - MIT

Basic Rebacking - UC Davis

Spine Repair - Ohio University

Bond Liner Spine/Joint Reinforcement - Northwestern

Spine Repair - Northwestern

Minor Repair - Cornell

Spine Repair - Michigan

Spine Repair - Emory

SPINE REPAIR

A common problem encountered in books that circulate frequently is that the covering material on the spine is torn at the head, broken in the joint or completely off.

You will need:

Bookblock Spine Lining

Permalife

Measure - Spine thickness by BB height

New Cover Cloth and Lining for the Spine

Bristol or heavier board (for flat back books) to be attached to new cloth

Measure - Spine thickness by board height

Appropriate book cloth in weight and color

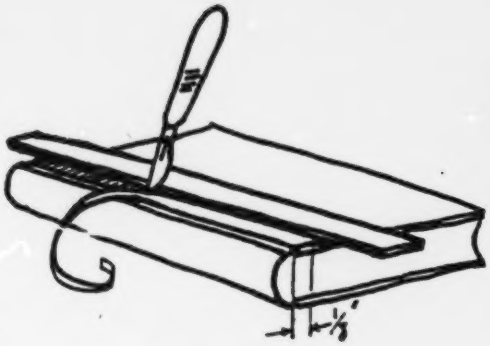
Measure - Height of boards + 1½" by spine + the amount needed on the boards

Preparation of Spine and Boards

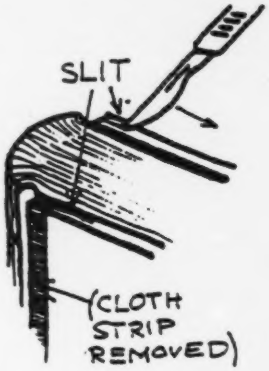
1. Remove the worn spine and set aside. Should the title of the book by illegible it is best not to save it. Either type or stamp a new title.
2. Take off as much of the spine lining as possible by hand or with a knife. Should the lining resist removal, use the Jiffy Steamer or wheat paste to finish. It's not important that every last little bit be removed.

U. of Cincinnati and Ohio State University, 1992

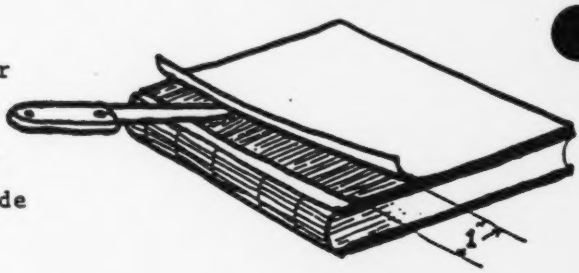
3. Place a ruler on the cover 1/16" to 1/8" in from the edge on the spine side and cut the cloth the entire height of the cover with a scalpel. Be careful not to slip off into the joint and accidentally cut the inner paper hinge.
Turn the book over and trim the other side.



4. Using your scalpel slit the cloth on the edge of the board at the head and tail about 1".

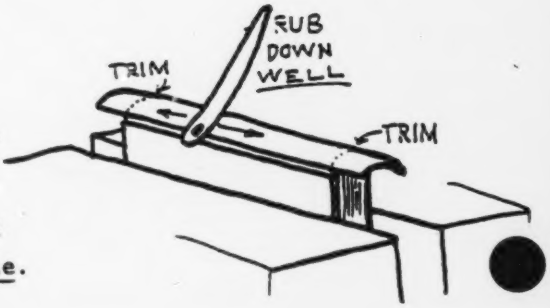


5. Insert the flat part of a knife (or a micro-spatula) under the trimmed edge of the book cloth. Slide the knife under the cloth and lift the cloth back about 1". It sometimes helps to slightly lift the knife to loosen the cloth as you slide the knife along.



6. Cut a piece of Permalife the width of the spine by the height of the BB plus 1". See Working Tips for measuring with a strip of paper around the spine. Check the fit of the lining against the spine and adjust the width if necessary.

7. Apply PVA mixture to the spine and put the lining strip down. Rub it well through wax paper. Trim off any excess that extends beyond the head and/or tail.
* If the book is heavy or oversized, now is the time to attach a hollow tube to the spine.



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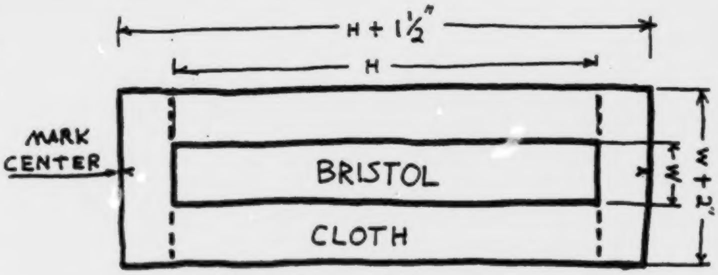
Preparing the New Spine

1. Select book cloth that is as close in texture and color to the original cloth as possible. Cut it to the height of the boards plus 1½" by the width of the spine plus 2". The grain must be from head to tail. Lightly fold in half lengthwise and pinch the ends.

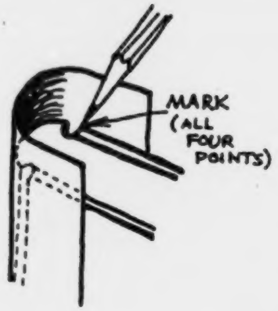
2. Cut a piece of bristol the height of the boards by the exact width of the spine. Again the grain must be from head to tail.

3. Apply PVA mixture to the bristol and center it on the under side of the cloth using the pinched-in ends as a guide. Rub down well through wax paper.

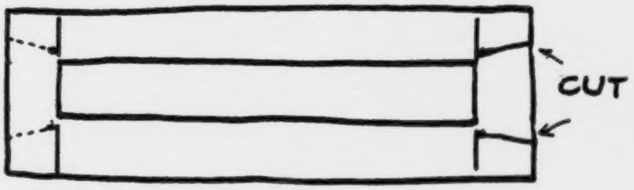


4. Draw a pencil line across the width of the cloth at the top and bottom of the bristol. These lines will match with the edge of the covers when the new spine flaps are turned in.

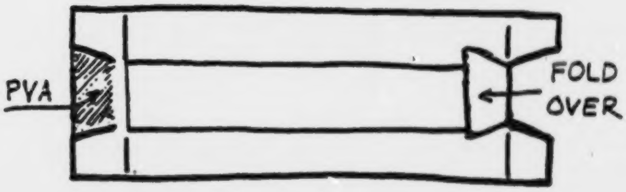
5. Gently round the new spine and center it on the spine of the bookblock. Match the horizontal pencil lines with the edge of the cover. On the underside of the cloth make a pencil mark where the edges of the cover boards begin.



6. Take the new spine off and cut in diagonally to the mark.

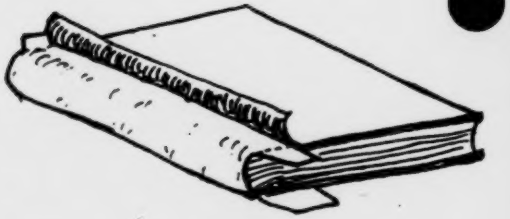


7. Apply PVA mixture to the center flaps and fold them over the bristol.

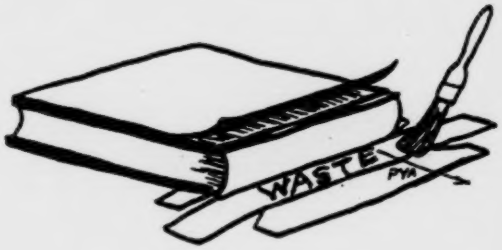


Attaching the New Spine

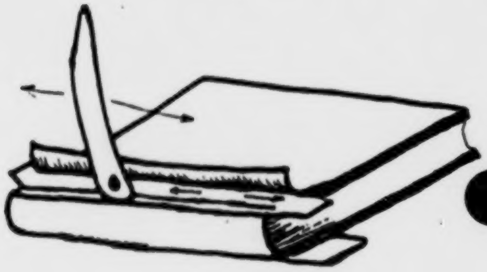
1. Center the new spine bristol on the spine of the bookblock, aligning it at the head and tail, matching the pencil lines with the edge of the covers. Slip the new cloth under the lifted original cloth.



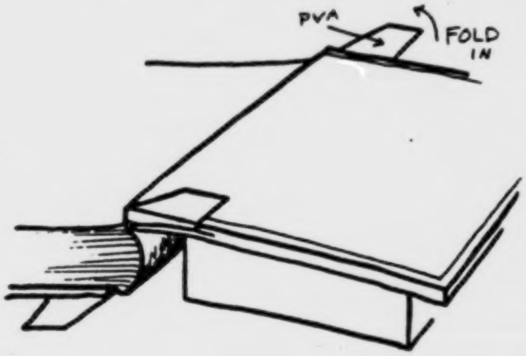
2. Put the book on your work surface being careful not to move the new spine. Unfold the cloth hinge and lay it flat. Mask the bristol so that no adhesive gets on it and apply PVA mixture to the hinge.



3. Remove the mask and place the hinge under the lifted cloth. Smooth cloth onto the board and mold it into the joint. Turn the book over and repeat on the other side.

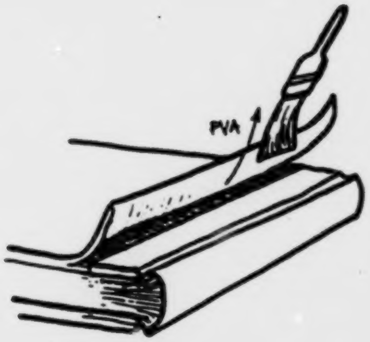


4. Open the book, supporting the cover from underneath. Apply PVA mixture to the tabs and fold in over the edge of the cover (over the pastedowns). Insert a piece of wax paper. Repeat on other side of the book.



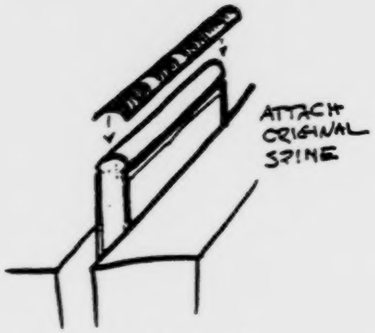
5. With the book closed apply PVA mixture to the underside of the lift cloth. Put cloth down over the new cloth. Rub well with a bone folder.

   Give a good nip in the press.

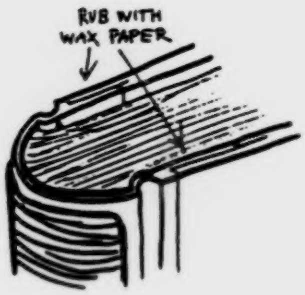


U. of Cincinnati and Ohio State University, 1992

6. Remove any loose lining from the back of the original spine. Trim it either by hand with a scalpel or with the Kutrimmer. The spine should be no wider than the spine of the book. Keep as much of the height as possible. Apply PVA mixture to the back and center it on the spine. Rub well through wax paper.



7. Loose or frayed ends of cloth on any part of the cover can be touched up with a bit of PVA and burnished with waxed paper.



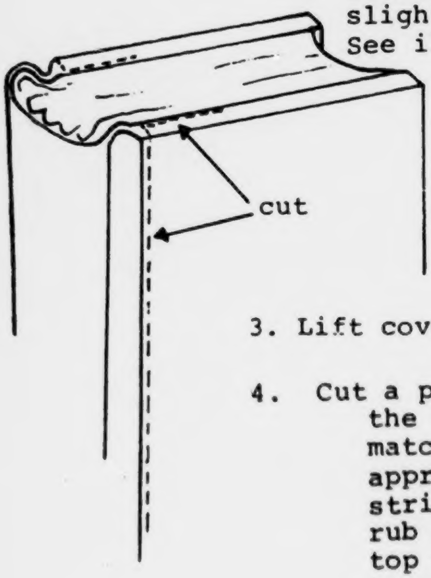
8. Place finished book on a shelf with a board and weight on top of it. Let dry over night or until dry.

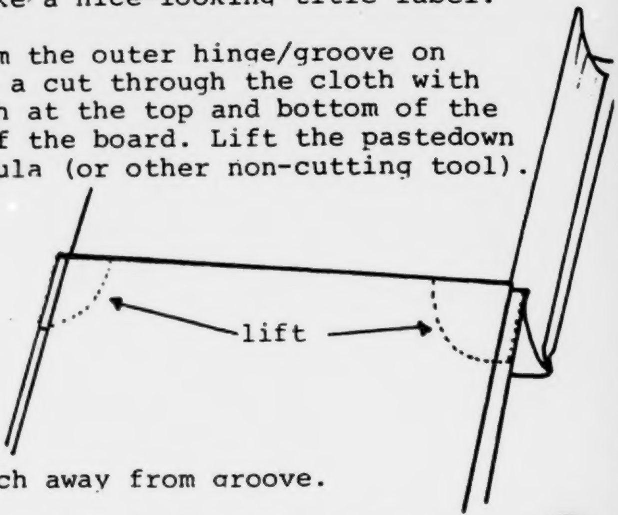
MIT

REBACKING

1. Remove spine cloth of book with scalpel or blade, and clean off excess material on back of cloth spine. Trim edges with cutter or straightedge and blade, saving as much of the spine as possible. One can also trim the spine down to make a nice-looking title label.

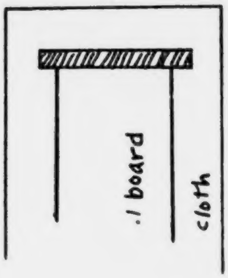
2. Place a ruler 1/16" away from the outer hinge/groove on the cover board, and make a cut through the cloth with a scalpel. Slit the cloth at the top and bottom of the book on the inside edge of the board. Lift the pastedown slightly with a microspatula (or other non-cutting tool). See illustration.





3. Lift cover cloth about an inch away from groove.

4. Cut a piece of .1 board the width of the book spine and the length of the cover boards. Cut a piece of matching or compatible color and weight cloth that is approximately 2" longer and 2" wider than the spine strip. Glue spine strip onto cloth strip with PVA, and rub down with bone folder. For added reinforcement of top edge of the spine, glue a piece of flat cotton tape to the spine strip, spanning strip and hinge areas.



5. Clip off the corners of the cloth strip. Glue the edges with PVA and lay over spine of the book, attaching glued cloth to exposed cover boards. Set the hinge by placing the book between metal-edged boards and putting in press. Or use knitting needles or dowels, boards, and bricks...

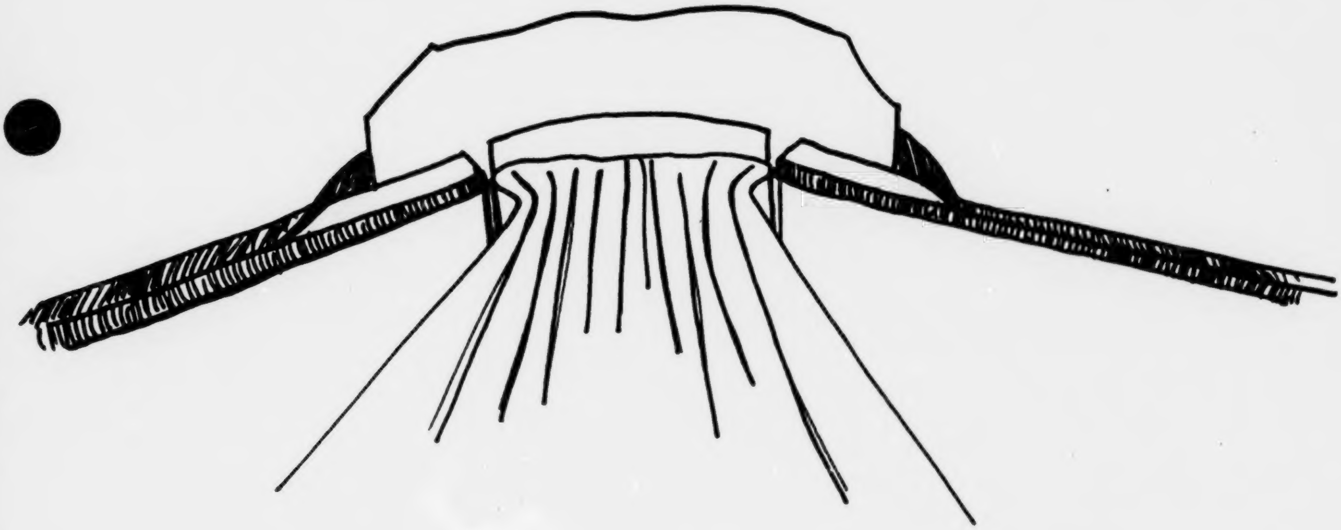
6. Glue down the cover cloth, rub as needed with a folder, put in press with metal-edged boards and press for a minute or two.

MIT

7. Set the book on end, fanned open toward self. Use a tool to make sure area from inner lifted pastedown on one side is clear through hinge, spine, other hinge and pastedown, making a clear area to turn in cloth. See illustration. Apply PVA to cloth, and work it into the spine and over the boards. Repeat on other end of book.

8. With microspatula, apply glue into the lifted pastedown area, and glue the hinges (hinge tighten) if necessary, place waxed paper strips into inner hinge, close and press book with metal-edged boards in press.

9. Attach original spine cloth with PVA.



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BASIC REBACKING

Used to replace torn, worn or missing cloth spines. The text block needs to be attached to its case with mull and endsheets intact. If the entire case is badly worn or the board(s) detached, it is better to send to the bindery for a new case or rebind. Adhesive bound books are best rebound. For books with important decorative covers or artifactual value, use Morrow and Dyal's instructions for New Bookcloth Spine with Mounted Original Spine in their Conservation Treatment Procedures, 2d ed. and use wheat paste instead of PVA.

TOOLS AND SUPPLIES

Buckram and bookcloth
Acid-free lining paper or lightweight bristol
PVA
Cutting mat
Scalpel (no. 4 handle and no. 25a blade)
Cork-backed metal ruler
Scissors
Bone folder
Glue brush
Wastepaper

1. Remove the original spine. Place a metal ruler just past the hinge on the cover board and slit through the cloth or paper with a scalpel. Repeat on the other side.

2. Moisten the back of the original spine and remove all paper backing. If a paper cover, delaminate until only a thin layer remains. Let dry completely before trimming to fit inside the spine area.

3. Create spine liner or inlay. Make a paper pattern of the spine width by laying a strip of paper across the spine and cutting a notch on each edge of the spine at the widest point of the shoulder. Fold down the corners at each notch.

4. Cut spine liner the width of the paper pattern and the exact height of the boards. Grain should run vertically.

5. Select buckram of appropriate color and width. It should extend approximately 1" above the head and tail and 1 1/2" onto each of the boards.

6. Center the book on the buckram. Draw equal lines 1 " from the top and bottom using the book height as a pattern. Curl the buckram around the spine and clip the top edge of the buckram at the spine edge of the boards. Remove and transfer the measurement to the other end.

7. Draw lines connecting the marks at each end.

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8. Cut V-shapes at each end with a scalpel, the point of the V being where the lines intersect. Be very precise.

9. Center the spine liner and glue onto the buckram. Rub down with a bone folder.

10. Apply glue to the spine turn-ins at the top and bottom. Fold down and rub well onto the spine liner.

11. Apply glue to the remainder of the buckram, avoiding the spine liner.

12. Hold the book by its fore-edge, pushing the book block back toward the spine and making sure the pages match the endsheets in placement. Place the buckram onto the spine of the book, then press the glued sides of the buckram onto the book boards. Rub down with your hand, then adjust placement if needed. Using your bone folder, rub down the buckram on both sides, then form the grooves along the book shoulders.

13. Fold the tabs over the ends of the boards and rub them down with the bone folder onto the pastedowns.

14. Wipe off any excess glue from the edges of the buckram.

15. If the book's title is salvageable, trim neatly using a scalpel and clear straightedge. The title needs to be narrower than the width of the spine to prevent catching. Apply glue to the title and place onto the buckram spine. Rub down carefully over Reemay or waxed paper with the bone folder.

16. A new call number label can be affixed if needed.

GENERAL INFORMATION

Class A Buckram in various colors is torn along the grain into strips of varying widths. These are then trimmed to width as needed. Lighter bookcloths are used for small, light books, but the majority are rebacked with buckram for strength.

Work is batched for more efficiency.

Tyvek strips are sometimes used for reinforcement in very heavy books. The strips are glued along the fold edges at the top and bottom of the buckram.

Torn endsheets at the hinge area are reinforced with needle torn strips of mulberry paper or kizukishi pasted on and rubbed down.

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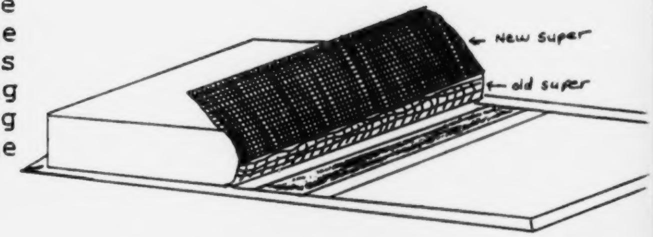
Ohio Univ

SPINE REPAIR

Rebacks (a.k.a. spine repairs) are done on books with spines which are torn, detached or badly frayed. Books with missing or damaged boards receive new cases.

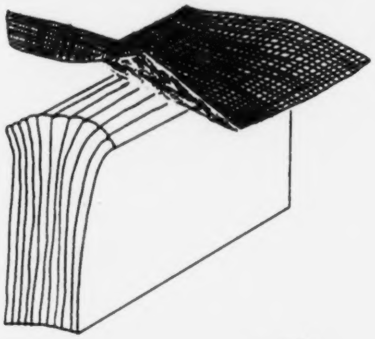
If the book needs new hinges as well as new spine, attach the new super first as per instructions A. through D., then continue with rebuilding the case.

A. Be sure that the original spine lining is firmly adhered to the spine. If any of the lining is loose, remove it to avoid having the weight of the textblock pulling the hinge/lining loose from the spine.

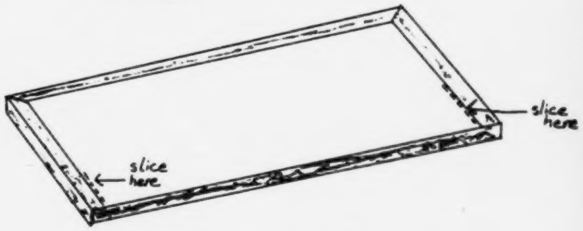


B. If only one hinge is torn, adhere a piece of super to about 1/2inch of the spine and carefully rub the super to the spine so the cloth is well adhered to the spine. The super should extend 1.25 inch beyond the spine.

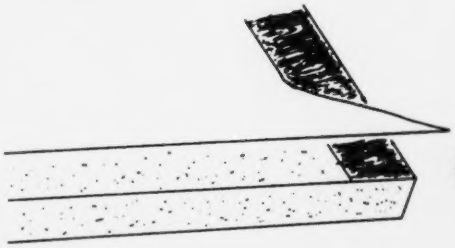
If both hinges are torn, adhere a piece of super which extends 1.25 inches beyond the spine at both hinges. Adhere the super to the spine, and carefully rub the super to the spine so the cloth is well adhered to the spine.



C. Make a 1.5 inch slit parallel with the pastedown at the spine edges of each board. Be sure to cut through the turn-in into the board.

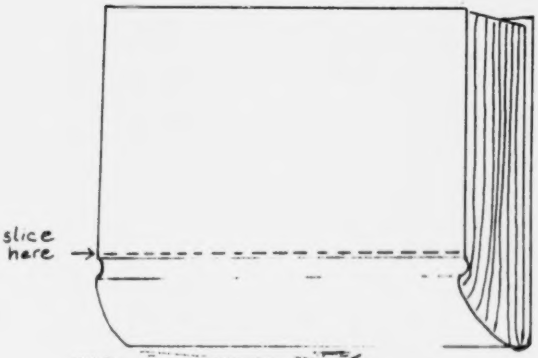


D. With a knife or thin tool, carefully lift the pastedown and a bit of board from the board underneath. Usually lifting under the original super helps.

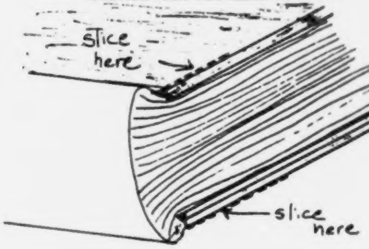


REBACKING THE CASE

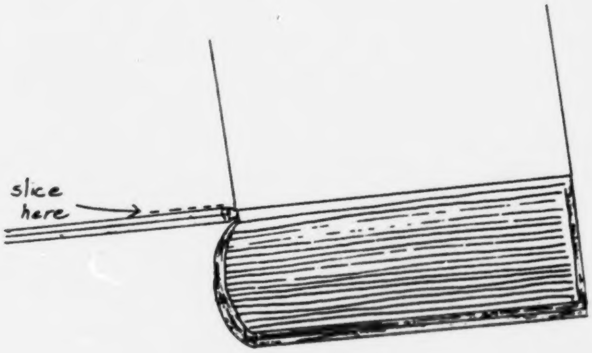
1. If the original spine is still partially attached, remove it by slicing about 1/16th of an inch from the edge of the board which is adjacent to the spine. Repeat for the other board. This step will clean up any ragged edges of worn covering material.



2. Cut through the covering material at each of the corners adjacent to the spine. The cut should be about an inch in length.

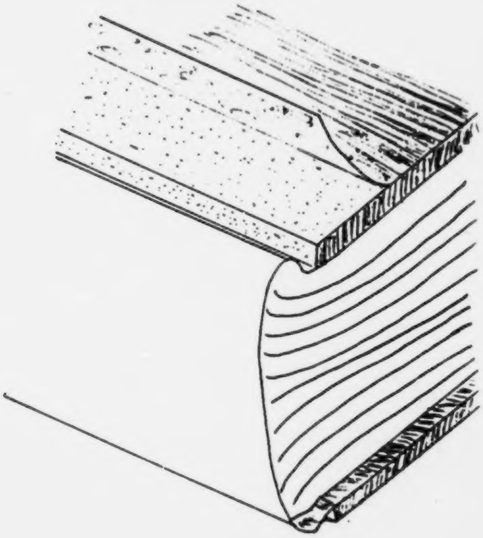


3. Cut through the covering material at the edge of the turn-in.

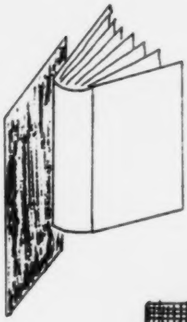


4. Carefully lift the pastedown and bit of turn-in back about one half inch.

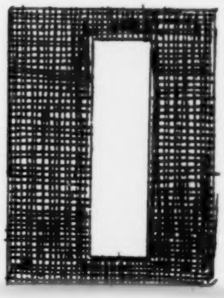
5. Carefully lift the covering material by sliding a knife or very thin bone folder under the corner of the covering material, continue sliding the tool the length of the spine. For fragile covering materials, one may need to make several small slices in order to avoid breaking or tearing the material.



6. Measure the spine width and cut a piece of bristol exactly the arc of the spine and 1/8th of an inch shorter than the board length.



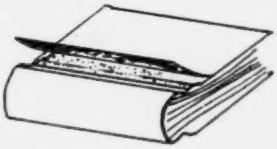
7. Cut a piece of cloth so that it extends at least one inch beyond both joints and at least 1/2 inch beyond the head and foot.



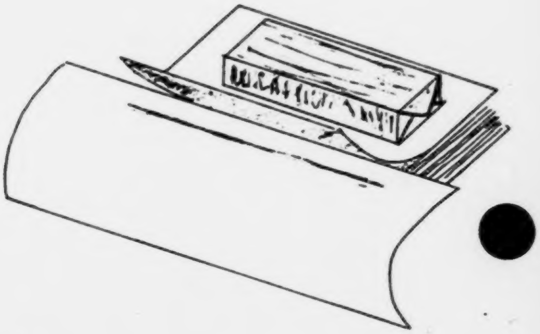
8. Apply pva to the spine piece, center it on the wrong side of the cloth.

9. Rub the bristol firmly with a bone folder.

10. Align the textblock within the case using the original pastedowns as positioning guides.



11. Place the bottom board up with the spine facing towards you. Place a heavy weight on top to keep the boards from shifting.



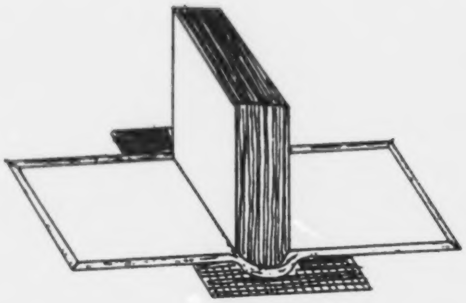
12. Apply adhesive to one edge of the new spine.

13. Slip the spine under the lifted covering material and center it over the spine lengthwise as well as widthwise.

14. When the new spine is centered, bone in the joint and rub the rest of the cloth onto the board.

15. Carefully pick up the weight, turn the book over and repeat for the upper board.

16. Holding the book by the fore edge, place the spine on the bench, open the boards to expose the turn-ins.



17. Apply a generous coat of pva to the turn-ins; roll the material over at the corner and continue rolling it under the pastedown, under the spine and under the other pastedown until the cloth is firmly rolled around the edge of the boards.

18. Place a sheet of waxed paper in between the pastedown and flyleaf of both boards and place in a press for about 10 minutes.

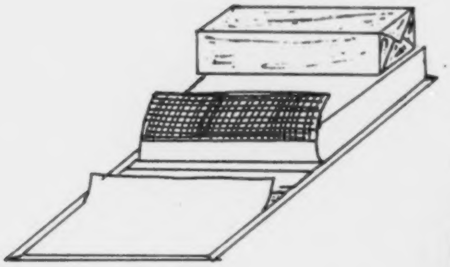
19. Apply a thin coat of pva to the lifted covering material on both sides of the book. Rub gently, but firmly, especially if the covering material is plastic, paper or 19th century cloth.

for rebacks with new hinges, make the case using # 1-D and 6-19. then finish with 20-28

20. Align the textblock in the case using the original pastedowns as positioning guides.

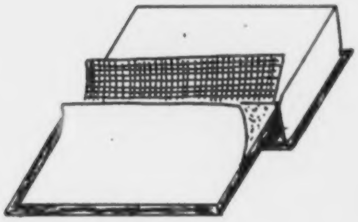
21. Lay the volume with the lower board up and spine facing you.

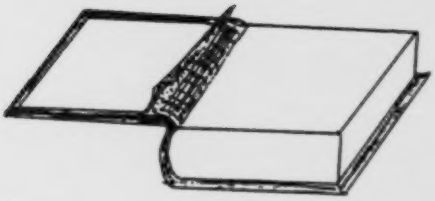
22. Carefully open the top board and place a weight on the textblock.



23. Apply adhesive to the joint area of the case and to the board side of the lifted area.

24. Carefully but FIRMLY hold the board in position as you adhere the new hinge first to the joint area and edge of the board and then fold the super onto the board. Rub the hinge firmly onto the board and remove any wrinkles.





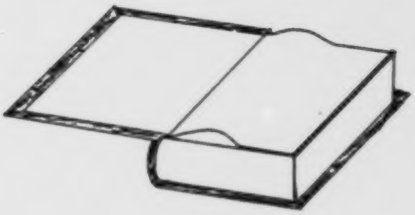
25. Apply a thin coat of adhesive to the lifted pastedown and gently but firmly rub into place. Care must be taken with 19th century and other items whose paper is fragile.

26. Lay a sheet of waxed paper between the text and the board.

27. Attach the other hinge. Insert a sheet of waxed paper between the text and the board and place the volume between weighted pressing boards.

for books with endsheet(s) still attached

28. Apply a thin coat of adhesive to the lifted pastedown and gently, but firmly rub into place. Hold the fore edge of the pastedown flush with the fore edge of the text with one hand while gently pushing the pastedown back into the joint with the other hand. OR Place the spine of the book on the bench and open the newly adhered joint. With one hand gently press the pastedown into the joint, making sure that the fore edge of the pastedown is flush with the fore edge of the text.



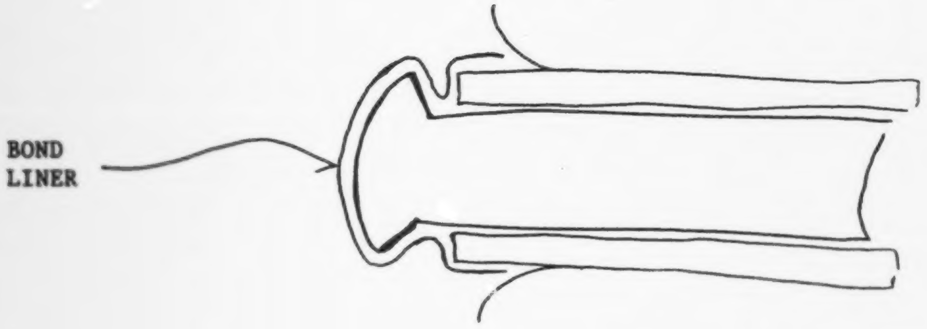
BOND LINER SPINE/JOINT REINFORCEMENT

This technique is used in conjunction with the spine repair of hard cover books. It is particularly useful with large or heavy books where the inner joint is intact but of insufficient strength for the long term use of the book.

After the original cover spine has been removed, and all loose spine liners and adhesive have been removed, lift the cloth sides at the outer inside board edges (as for normal spine repair). Correctly position the boards and secure with a weight or in a press. At this point cut a piece of acid-free bond paper the length of the spine by the spine width plus 2" (be sure the grain runs lengthwise). Apply adhesive to the spine of the book. Next, moisten the bond liner with water (spray) on one side and apply adhesive on the other side. Center onto spine and rub down onto spine, then into the grooves and finally onto the boards under the lifted cloth sides. Allow to dry.

Continue with the spine repair.

sk-92
N.U.Library



* Repairing the cover away from the textblock:

1. Lift the cloth at the inside edges as you would normally.
2. Cut the bookcloth and spine liner to the appropriate sizes.
3. Attach the spine liner to the bookcloth strip with adhesive (do not fold over turn-ins). Draw a pencil line 3/8" away from both edges of the spine liner.
4. Apply adhesive to one side of the cloth strip and carefully position the appropriate board up to the pencil line, slipping the new bookcloth under the lifted cloth. Rub down. Repeat on other side.
5. Apply adhesive to the turn-ins and fold down over the boards. Rub down.
6. Fit the repaired cover over the textblock and rub down the grooves into the joint. Check the fit (if the fit is wrong, it can be adjusted by removing the cloth strip and doing it again).
7. Remove the cover, apply adhesive to the flanges of the folded back endsheet, replace the cover and press for at least 20 minutes.
8. Continue with repair as necessary.

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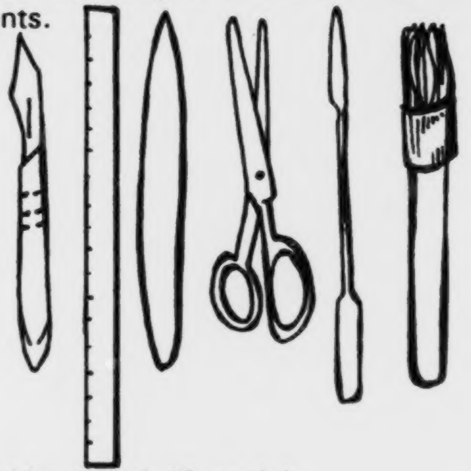
Spine Repair

This treatment is appropriate for circulating books with average to heavy use. Used in conjunction with internal repair and reinforcement, it provides a strong cover repair for the critical areas of wear at the spine with a minimal amount disruption to the original binding components.



Tools:

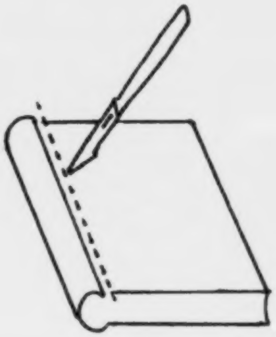
- Scalpel
- Straightedge
- Bone folder
- Scissor
- Microspatula
- Paper cutter (optional)
- Press

Materials:

- Pyroxylin or acrylic coated bookcloth (C grade)
- .010 acid-free Hollinger stock
- Acid-free 80 lb. text paper
- PVA/methylcellulose (mix) adhesive

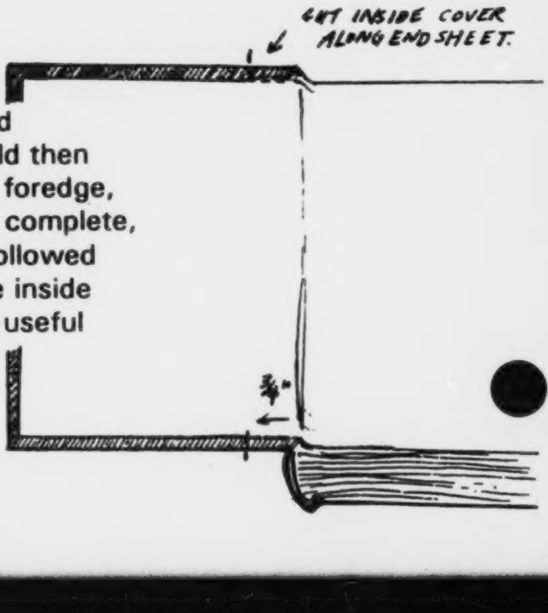
Procedure:

BOOK PREPARATION



1. With scalpel and straightedge, make a uniform incision through the bookcover material 1/8" inside the inner board edge (for both front and back boards). Be careful not to slice through the outer hinge.

2. Carefully continue the incisions over the board edges onto the inside squares. Each cut should then continue along the endsheet 3/4" toward the foredge, then back up and over the board edge. When complete, The cut portions of the square be can lifted followed by a one inch flap of the cover material at the inside edge of each board. The microspatula is very useful in lifting this material.



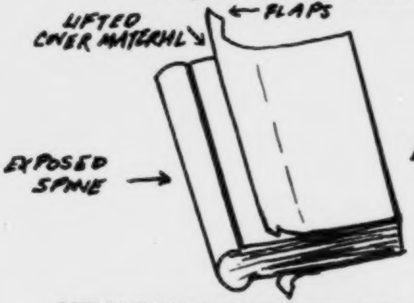
Northwestern

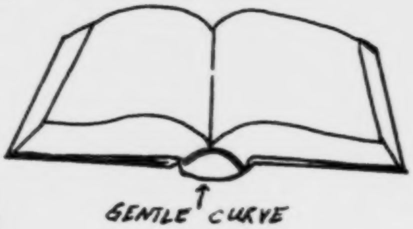
3. Now remove the spine and joint material. This should come away easily, although some additional small cuts at the inside board corners may be necessary. Do not discard.

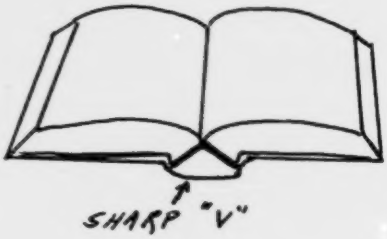
4. Remove any loose linings on the book spine that can be scraped away with a dull knife. Be careful not to damage the sewing.

5. Gently pry the boards slightly away from the joint area: Is there any unadhered areas between the board and the endsheet at the inside edge? If so, add PVA at those points with the spatula and press (or weight) the book until the PVA has set.

6. Now open the book to the middle and look at the spine arch: Does it form a gentle curve, or a sharp "V"? If a "V" is formed add an acid-free spine liner. The spine liner must have the grain going long and be the exact length and width of the spine. (If the joint appears weak, consider using an **extended bond liner**- see instructions). Apply adhesive to the spine, moisten the liner, position and rub down thoroughly. Some large, heavy books may require two. The result (after its dry) should be a spine arch with a gently curve (segment of a circle).







NEW SPINE CONSTRUCTION

7. Cut a strip of Hollinger stock (grain long) exactly the width of the book spine by the same height as the cover boards.

8. Select a matching or compatible color bookcloth. Cut a strip that is 1 1/2" taller and 1 1/2" wider than the Hollinger strip.

9. Glue up the Hollinger spine strip, center it on the cloth strip and rub it down well with a bone folder.

10. Now cut a very narrow wedge at the center of each end- not quite reaching the creases. The widest part of the wedge should not be more than 1/8".

11. Fold the ends of the cloth carefully over the Hollinger strip and crease. Unfold them and cut triangles off of each cut as far as the crease. (This reduces bulk at the joint when attached). See next page for illustration.

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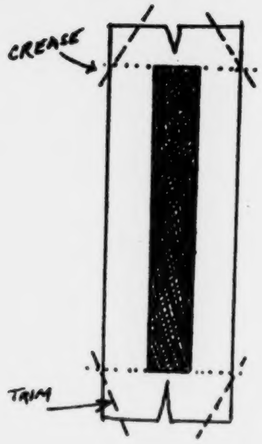
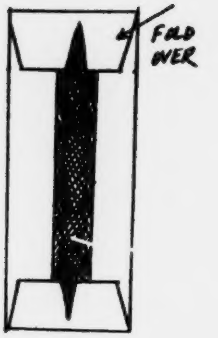
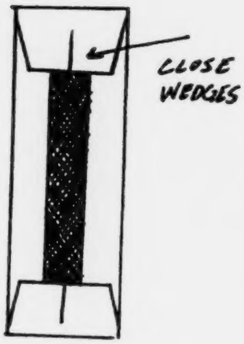
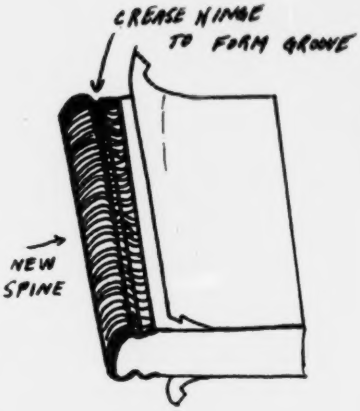







CREASE HINGE TO FORM GROOVE
NEW SPINE

12. Glue up the ends and fold over the Hollinger strip, closing the wedge to produce a slightly curved crease. The resulting corners should be a little below the Hollinger strip ends. (This facilitates a good fit under the flaps on the boards). Rub down.

13. Gently curve the new spine by rolling it around a dowel rod is makes the new cloth spine fit the shape of the book spine better.

14. Bending inward the sides of the new cloth spine, fit it snugly the spine of the book. While in position, carefully lay the book down on the bench. Crease through the cloth into the hinge area, forming the shape of the groove into the cloth spine. Repeat on the other side, then remove the cloth spine.

ATTACHING THE CLOTH SPINE

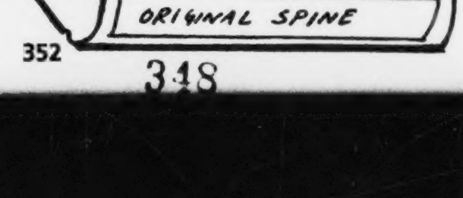
15. Glue up one side of the cloth spine (do not allow PVA to touch the Hollinger strip). Accurately reposition the cloth spine to the book, place the glued side on the cover board under the lifted flap of material. Immediately crease a groove at the hinge with a folder, then rub down the cloth on the cover board. Repeat for the other side to finish the attachment.

16. Brush a thin coat of PVA under the lifted flaps of the boards and press down with your fingers. Then bone carefully- watch for glue squeezing out. Also add PVA at the lifted squares and tuck neatly back in place.

17. Trim the original spine so that it is at least 1/8" narrower and shorter than the new cloth spine. Glue up, center and rub down well on the new spine. (Be sure that the book is right-side-up).

18. Apply a little PVA at frayed edges and corners of the cover to prevent further wear and fraying.

19. Leave book to dry in the press for at least 15 minutes between brass-edged boards.



MINOR REPAIR

A. Cleaning. The backbone is cleaned as indicated, but particular care must be taken not to damage the board attachments.

B. Preparation of the Text Block.

1. Tip-in loose pages, if any, with glue stick or PVA.
2. Gather materials.
    - a. joint paper - 2 pieces of acid free paper each the height of the text block.
    - b. liner - width of the back of the text block and a little longer than the height. Tear as measurement is not critical.
    - c. inlay - same width as liner - height of front board
    - d. buckram - width adequate to provide sufficient lap onto both front and back boards. Height of book plus about 1.5 cm at both top and bottom for turn-in.

3. If liner and inlay are not exactly the width of the text block, trim both together to this width.

4. Apply an even coat of glue on the back of the text block and attach the liner even with the edge of the text block. Rub firmly, wipe off excess glue, and bone down.

5. Trim ends of liner even with the ends of the text block. Wipe off excess glue, if any.

6. With the knife, cut 1 inch slits at the joints in both front and back of the text block at both the head and tail, close to the joints.

C. Making the New Spine.

1. Place buckram right side down on scrap paper and apply an even coat of glue.

2. Center inlay both vertically and horizontally and press down.

3. Place back of text block on inlay and bring sides of buckram up over boards. Be sure buckram is even on both sides of the book. Rub off excess glue with a cloth or rag.

4. Stand book on tail and with middle fingers, pull text block away from boards at head. Using forefingers and thumbs, roll buckram ends into slits in the joints. Smooth up buckram with ring and pinkie fingers and make sure there are no "pleats".

5. Place book on spine and holding text block upright, rub down buckram with bone folder to sharpen fold at head and tail and firmly attach ends.

6. Wipe off excess glue with cloth or rag along edge of buckram on outside of boards.

7. Using a bone folder, make the joints on both front and back.

8. Set the joints by tipping bone folder down over top and bottom of joint. Allow to dry stacking foredge to backedge.

D. Covering Slits.

1. Lay books in a line with the cover of one book open and supported by the text block of the adjoining book.

2. Apply glue to one piece of joint paper.

3. Place glued joint paper over the joint with about 1/4" on the text block and the rest extending onto the inside of the front board. Joint paper should cover the buckram on the inside of the board. Smooth down and allow to dry.

4. Repeat with the back cover open and the other piece of joint paper. This covers the slits made to insert the new buckram.

E. Titles on Spines.

1. If the old spine is still legible and intact, trim evenly with paper cutter.

2. Remove excess paper or cardboard from back of old spine. Separate with knife blade if necessary, or scrape.

3. Apply glue to old spine, place on new spine and remove excess glue with a piece of cloth or rag.

4. Place scrap paper over old spine and bone down.

5. If the old spine is illegible or too badly damaged to use, photocopy the title either reducing or enlarging to appropriate size, and cut to fit on the new spine. Apply as above.

✓ SPINE REPAIR (Joints broken, hinges intact)

Basic Technique: Greenfield pages 142-150

Variations:

- We add cord at the turn-ins when the book does not have endbands.
- We complete the entire procedure without drying intervals.
- The bristol inlay is glued to the cloth before marking and cutting.
- We incorporate original spine fragments as the final step in the procedure, i.e., after the new spine has been attached.

351

Spine Repair

Criteria:

Spine is worn or torn at the joints, headcap, or tail. Cover is still in relatively good shape. Super **must be intact.**

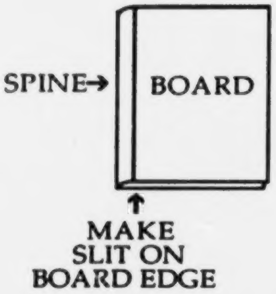
Materials:

- support boards
- scalpel
- scissors
- microspatula
- ruler
- bone folder
- adhesive (PVA/paste mix)
- glue brush
- spine inlay (bristol strip)
- buckram or book cloth
- rods or metal edged boards
- 3/4" or 1" x 16" template
- 1/8" nylon or polyester ribbon
- scrap paper
- tattle tape
- moisture barrier
- book press or weights
- alkaline scrap paper for spine piece

Procedure:

1. Remove original spine from case: Using a ruler and scalpel, cut cloth approximately 1/16" onto the boards away from the joint area. This should be done on front and back boards. Cut away original cloth at head and tail with scissors to completely remove original spine. Be extremely careful not to weaken or cut the super. Lift cloth at joints using microspatula.

2. **Type A**--inserted under original cloth (for most cloth bound books): At board edges, make a slit approximately 3/4" onto board edges. Cut cloth at top and bottom edges equally. Using microspatula, lift cloth along edges.



Type B--replacement cloth placed OVER original cloth (for quarter bindings, paper- and thin cloth-bound books): Done when the book was covered as a quarter binding originally or when there is damage to covering within one inch of the spine. Also used in instances when damage could occur by lifting the original cloth or binding material up.

For all books:

3. Remove old inlay from original spine (sand old spine if necessary). Trim original spine to eliminate frays and deteriorated areas, but retain all information, especially the call number. The original spine piece should be slightly narrower than the book's distance from shoulder to shoulder. If the spine is in extremely poor condition (cannot be read), do NOT affix original spine onto book.

4. Clean back bone of textblock. Eliminate all rough areas and any loose material, being careful not to damage the signatures, sewing, or super.

SPINE REPAIR PROCEDURE
Emory Conservation Unit

At the pre-cut station:

5. Measure text block spine for width of new spine inlay, measuring from shoulder to shoulder. Select inlay and cut to height of cover boards. Cut inlay to appropriate width as necessary. If doing a flat back spine, use a binders board inlay similar in thickness to the cover boards. Cut to appropriate height and width. Also select and cut a piece of scrap alkaline paper approximately the same size as the spine inlay.

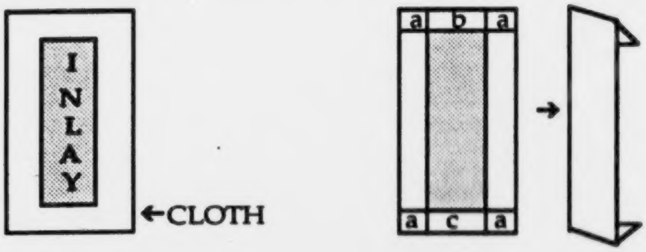
6. Select cloth for new spine: Buckrum should be used on medium to large books, and anything heavy. Book cloth may be used for quarter bindings, paper-bound, and small cloth-bound books. Cloth should be cut at least 2" longer than cover boards and 2" wider than spine inlay.

At the work bench:

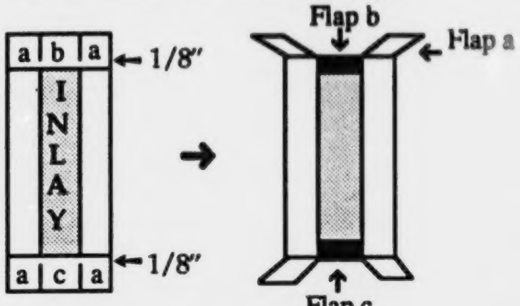
7. Glue out spine inlay (or board if doing a flat back spine) and center on the inside of the new cloth spine. Align the bottom of the inlay with the fibers in the book cloth. Allow to dry under weight.

8. Use a 3/4" or 1" template to trim new cloth to exact dimensions. Cloth should extend this distance on all sides around inlay. Use the 1" template for larger books, books with wide spines, and flat back books.
For Type B (quarter bindings) cloth dimension will need to be matched to individual books allowing for (usually) one inch of fabric on each board.

9. Make hand creases at side edges of inlay.



10. Make straight cuts on cloth to within 1/8" from inlay edge.



TYPE A & B

11. Cut polyester ribbon to extend 1/4" beyond either side of inlay. Glue ribbon to head of inlay. Bone down. Glue down flaps B and C. Bone down and weight to dry.

12. **Type A**: Using microspatula, lift and separate outer cover material from the boards up to the 3/4" edge cuts. Approximately 3/4" of cover material should be lifted. Remove any loose or excess board material.

Type B: Paper-bound and thin cloth-bound books for quarter bind: new spine piece will be placed over original material on boards.

13. Round the new spine on a thick rod.

14. Put tattle tape on spine as required. Glue down any frays on book edges and near spine.

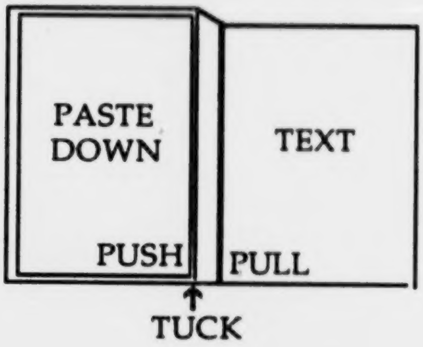
15. Check new spine piece for proper fit (width/height). Properly position new spine (making sure the area reinforced by nylon ribbon is at the head of the book) and expose one side of the board so it may be glued.

16. Working on one side at a time:
    Type A: Glue up exposed area of board, lifted side of cover, and joint area (DO NOT glue flaps of new spine). Place new spine material under glued out edge of existing cover.
    Type B: Use scrap paper to mask area of the book NOT to be glued. Carefully glue the cover board and joint area. Place new spine material over glued out area.

17. Pull new cloth tightly over into position. Hold cloth taut on board as you firmly bone in joint with bone folder.

18. Open up book not more than 90 degrees and place new glued board flat on bench. Bring flaps "a" over and cut carefully to meet endsheet edge exactly. (These flaps need not be cut if endsheet will be replaced.)

19. Glue out flaps, and position. Care should be taken not to tear endsheet during tuck procedure. Using a pointed bone folder, tuck excess "a" flap to the inside of the joint at the spine. It may be necessary to pull the text "in" while pushing the board "away" to gain access to the inside of joint at the spine area. It may be helpful to stand book on head or tail to tuck excess cloth.



20. Insert blotter paper in book between pastedown and flyleaf.

21. Repeat steps 16-20 for other side, if necessary. Make sure you hold cloth onto board as you bone in joint so that any excess cloth will be taken up from **spine** area.

22. Complete endsheet replacement as necessary.

23. Glue out original spine and position it on new spine.

24. Place in press for at least 15 minutes with knitting needles or metal edged boards.

15

Recasing

(Including Replacement of Endsheets)

The section documents a variety of treatments preparatory to, and including, recasing (reattaching to a textblock an intact or repaired case). In its fullest expression, recasing typically consists of spine cleaning, textblock consolidation and leaf repair, spine relining, replacement or reinforcement of endsheets, and casing the textblock in. Specific examples are provided of different endsheet models and attachment styles and casing-in methods, as well as descriptions of the full recasing procedure including case removal, spine cleaning and textblock consolidation.

Recasing is appropriate for case bound volumes and may be performed when it is considered desirable to retain the original publisher's case. Compare the treatments in this section with similar treatments under Case Replacement.

Recasing (Including Replacement of Endsheets)

Attaching the Bookblock To a Cover In Good Condition - Cincinnati

Reattaching a Bookblock To a Cover In Good Condition - Ohio State

Attaching New Endpapers to the Bookblock - Ohio State

Recase - Casing In - Berkeley

Wrap Around Endpapers - Cincinnati

Folded Back Endsheet - Northwestern

Reattaching the Original Case - Michigan

Reattaching an Original Case Using a Split Board Structure - Michigan

Overcasting (endsheets) - Cornell

General Bench Procedures for Book Repair: Full Repair - Cornell

Partial Repair - Cornell

New Endpapers - Sewn-On - Ohio State

Endsheet Replacement - Emory

New Case - Michigan

Collection Maintenance Repair - BookLab, Inc.

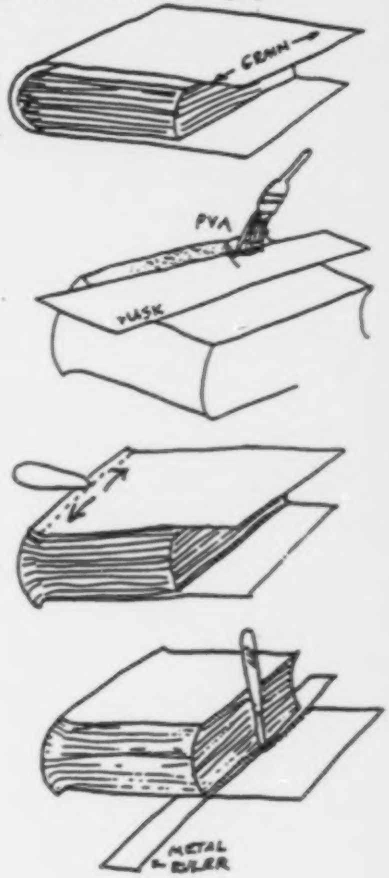
Rebinding - MIT

ATTACHING THE BOOKBLOCK TO A COVER IN GOOD CONDITION

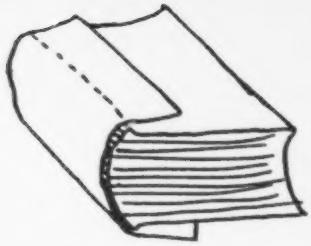
This repair is for a book that has a cover that is almost, or completely off, but it is in good condition. The joint areas of the cover are not worn. The endpapers may be missing, or deteriorated, and should be replaced. The sewing is intact and the paper is not brittle.

Preparing the Bookblock

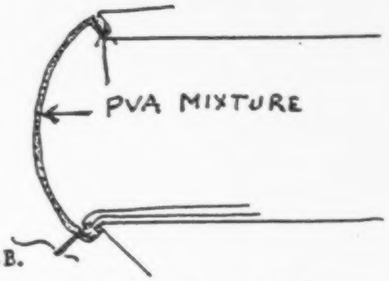
1. Clean the spine.
2. Endpapers: If the endpapers are in good condition keep them attached. If they are missing or need to be replaced, remove all bits of the old endpaper that are still attached to the shoulder.
    - a. Cut a piece of Permalife or Mohawk paper slightly taller than the BB and wide enough to wrap around the text with an additional 2" beyond the foredge. Mold the paper around the spine to get its shape. Take it off and set it aside.
    - b. Place a piece of waste paper along the bottom of the shoulder. Brush PVA mixture on to the shoulder and the spine.
    - c. Insert the BB into the shaped endpaper. Bone the endpaper until it is firmly attached to the spine. Run the bone folder along the shoulder through waste paper. Check to make sure that the endpaper flexes freely and there is no "drag" on the first page of the text. Turn BB over and put PVA mixture on the other shoulder.
    - d. Trim the excess paper off at the foredge. Also trim the head and tail if necessary.



3. Making a combination spine lining/hinge bonnet:
    - a. This combination lining/hinge is made instead of stab sewing a cloth hinge to the shoulder. Cut a piece of book cloth (as close to the cover material in weight and color as possible) the BB height by the spine width plus 4". Fit the cloth on the spine and crease at the edge of the shoulder. You will have about 2" extending from the edge of the spine. The "right" side of the cloth is against the spine. Put the bonnet aside.



b. Brush PVA mixture on to the shoulder and spine. Insert the BB into the bonnet (as you did with the endpaper). Bone down very well.
Turn the BB over and do the other shoulder.



c. Carefully fold the cloth hinge back at the bottom of the shoulder.and bone the crease. Fill in the inside of the creased area with PVA mixture.
Crease the cloth again at the top of the shoulder. Repeat on the other side of the BB.

d. If the BB is in signatures, pierce four evenly spaced sewing stations in the first and last signature folds. The sewing helps secure the bonnet to the spine.

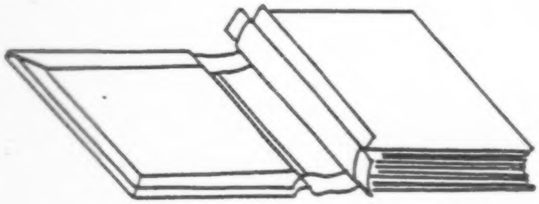
4. Hollow Tube: If the BB is oversize and/or heavy, put a hollow tube on the spine before casing in.

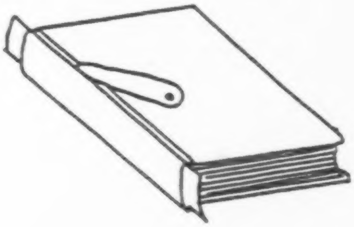
5. Attaching the BB to the Cover:

a. Inspect the cover. If the spine lining is too wide, damaged, or falling out, replace it.

b. Check the fit of the cover.

c. When a hollow tube is on the BB spine, brush PVA mixture on the outside of the tube. A piece of maxed paper inserted inside the tube insures that it won't accidentally be pasted shut.
Close the cover and bone the spine and joint. Place the book in the nipping press for about 5 minutes to be sure good adhesion between tube and cover.





d. Remove book from the press. Open cover, attach hinge to inside of the cover with PVA mixture. Let dry over night under a light weight.

[illegible]

RECASE

REATTACHING A BOOKBLOCK TO A COVER IN GOOD CONDITION

The prerequisite for this repair is a cover that is in good condition. In particular, the joint area must not be worn. Before starting, check the cover to be certain that its condition is acceptable, then proceed.

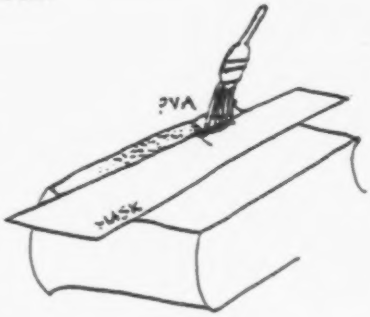
Preparing the Bookblock

1. Clean spine. If the original endpapers are in deteriorated condition, remove them and attach a wrap-around endpaper (see the individual instructions for making this endpaper). Should the endpapers be in good condition, keep them on the bookblock. Be sure and trim off any bits of paper that may still be attached to the shoulders -

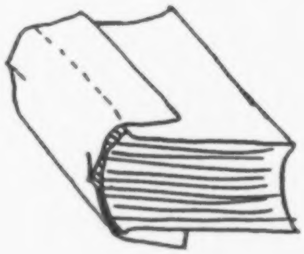
2. Measure the width of the spine. With a pencil mark the middle of the spine at the head and tail.

3. Cut a piece of book cloth that matches the covering material as close as possible in color, weight and texture. Measure it to the height of the bookblock by the width of the spine plus 3" to 4". Fold lightly in half and pinch in half at the top and bottom of the cloth.

4. Place a piece of waste paper at the bottom of the shoulder as a mask and brush PVA mixture on the shoulder and on the spine.



5. Center the cloth on the spine by matching the pencil mark and the pinched cloth at the head and tail. Rub the spine and shoulder very well with your bone folder through waste paper.



6. Turn the bookblock over and brush PVA mixture on the other shoulder and spine if necessary. Rub well through waste paper.

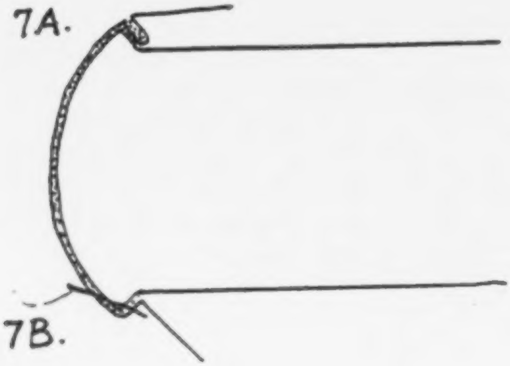
Ohio State.

7A. The following steps are for securing the hinge at the top of the shoulder.

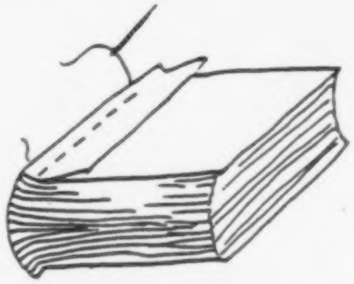
a. Fold and crease the cloth at the bottom of the shoulder.

b. Brush PVA mixture inside the crease and then rub all along the the shoulder with a bone folder until good adhesion takes place.

c. Fold and crease the cloth at the top of the shoulder. Rub well with a bone folder until the crease is very sharp.



7B. If the bookblock is large, thick and/or heavy, the hinge attachment will be stronger if all along sewing is done along the shoulder after the first crease but before the hinge is turned back on itself.



As a preliminary to sewing, pierce holes through the shoulder with an awl every inch or so at varying depths.

8. Line the spine with Permalife or Mohawk paper.

9. Place a hollow tube on the spine of large, thick and/or heavy bookblocks. The bookblock is ready to be reattached to the cover.

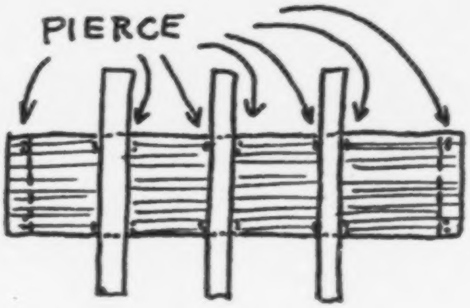
Utah State

ATTACHING NEW ENDPAPERS TO THE BOOKBLOCK

1. In preparation for sewing on new endpapers, the original endpapers (along with any bits remaining from them) must be removed from the bookblock and the spine cleaned. Attach ½ of a "V" hinge lengthwise to the bookblock, leaving the other half swinging free.

2. Cut three pieces of linen tape (or more if the book is tall) each the sum of the width of the spine thickness plus 3". Space the tapes on the spine, aligning them with previous sewing stations. Affix them with PVA. Approvimately 1½" of each tape is loose on each side of the bookblock.

3. Find the center of the first, second and third signatures at the front and back of the bookblock and inset a strip of paper in each. Pierce holes with an awl or needle from the inside to the outside of each signature along the sides of each tape and next to the original kettle stitches.

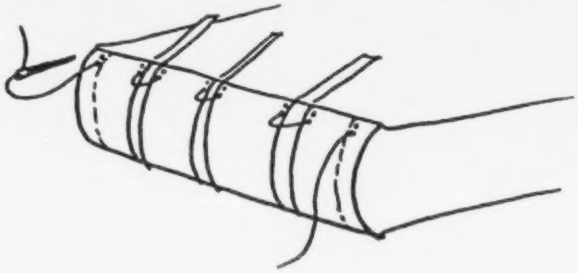


4. Lay one of the new endpapers (with cloth hinge visible) on the bookblock next to the tapes. Mark holes for sewing with a pencil on the underside of the endpaper 1/16" to 1/8" from the fold. Pierce with an awl. Note: If the sewing is through the center of the fold it will be visible when the cloth hinge is put down on the inside of the cover.

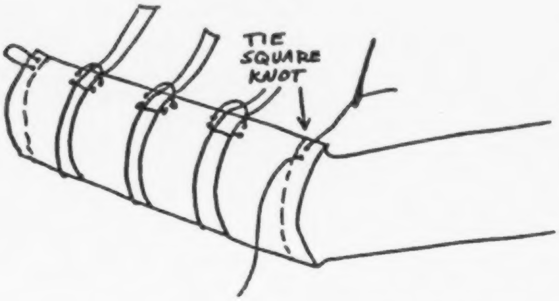
5. Cut a length of thread (number 20 or 25) equal to five times the height of the spine. Coat the thread with bee's wax.

Ohio State

6. Lift off the endpaper and set aside. Starting from the outside of the 3rd signature, leaving a tail of 3", sew all along around the tapes to the kettle stitch.

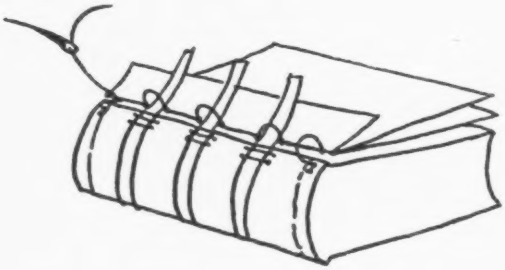


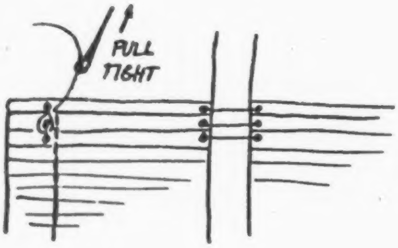
7. Go up into the 2nd signature and sew back to the kettle stitch. Tie off with a square knot.
Note: It is important to pull the thread in the direction you are sewing. Pulling back can break the paper fibers, particularly older paper. The sewing must be snug but not tight.



8. Go up into the 1st signature and sew all along and make a kettle stitch.

9. Lay the pierced endpaper in place. Put a small weight inside to keep it from shifting. Sew the endpaper to the tapes and make a kettle stitch at the end.





10. Turn the bookblock over and repeat the above steps from 3 on.

Ohio State

11. Put wax paper and waste paper under the "V" hinge, and brush wheat paste on it. Remove the waste paper (leave the wax paper) and gently but firmly pull the endpaper into position and press down. Turn the bookblock over and peat the step.

    Note: When the wheat paste is dry the bookblock is ready to have endbands put on the head and tail of the spine. The spine is then lined with Japanese paper.

Berkeley

RECASE - CASING IN

When the case is in good condition but one or both endsheets must be replaced or reattached, the volume may be recased, i.e., cased back into the existing case.

If the existing case is intact but very flimsy a better choice may be to send the book to the bindery for a new case instead of recasing.

A. RECASING WITH SINGLE FOLIO ENDSHEETS (lightweight volumes)

PROCEDURE:

1. If hinges are not fully separated, do so.

2. Clean old pastedowns as needed, removing any barcode labels, pockets, bookplates, etc., which would create lumps under the new pastedown. Sand pastedowns if necessary.

3. Tip new single folio endsheets carefully to shoulder of textblock. Tip them even with head at the front, and even with the tail at the back to facilitate trimming.

   If only casing in front or back, endsheets cannot be trimmed on the cutter, but must be trimmed by hand.

4. Replace super if necessary. Make sure the super is adhered around the shoulders of the endsheets.

5. Mark front endsheet for correct orientation of volume when casing in. Also mark the front inside of the case.

6. Insert waste sheet into fold of endsheet.

7. Get press ready, with brass edged boards, close platen down.

8. Apply PVA to new endsheet. Brush rapidly from shoulder outwards.

9. Press the board into the shoulder of the text, holding the endsheet flat with the bone folder. Close the cover fully.

10. Quickly check position of the text in the case. Adjust if necessary.

11. Bone well into the joint.

12. Repeat steps 7 - 12 for the back of the volumes if replacing

Berkeley

both endsheets.

13. Nip the book in the press (or use maximum weight to press if there is no press). Leave book under weight for one hour.

B. RECASING FOR HEAVY VOLUMES (over 1.5 lbs.)

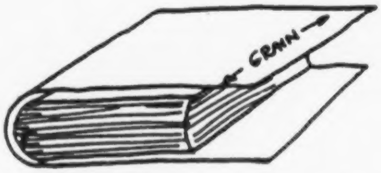
1. If hinges are not fully separated, do so.
2. Clean old pastedowns as needed, removing any barcode labels, pockets, bookplates, etc., which would create lumps under the new pastedown. Sand pastedowns if necessary.
3. Follow instructions for Preparation for New Case, steaming off old super, sewing on new double-folio endsheets, etc.
4. Recase textblock, as above, A. 5 - 13.

Cincinnati

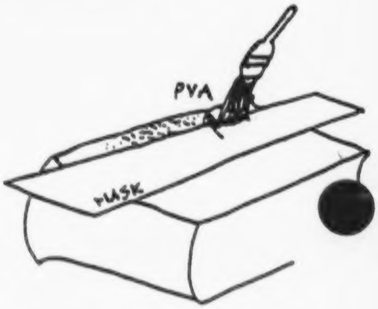
WRAP AROUND ENDPAPERS

This kind of endpaper is put on a bookblock when it is being reattached to a case that is in good condition (the joints must not be worn). The endpaper also serves as a lining on the spine before a cloth hinge is attached.

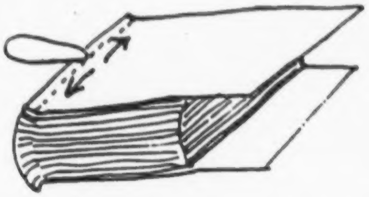
1. Remove the old endpapers. Clean the spine and remove all loose bits of paper on the shoulder, mull and glue.



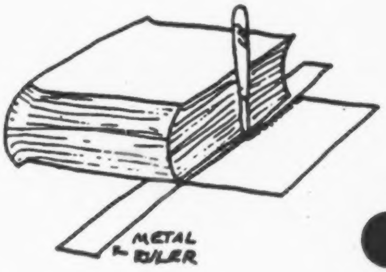
2. Cut a piece of Permalife or Mohawk paper slightly higher than the bookblock and wide enough to wrap around, plus 1 to 2" beyond the foredge. Mold the paper around the spine to get its shape. Take it off and set it aside.



3. Mask the bottom of the shoulder with a piece of waste paper. Brush PVA mixture 1/8" onto the shoulders and spine.



4. Place the bookblock into the shaped endpaper. Press it down to the spine. Bone it until it is firmly attached. Draw your bone folder along the shoulder through waste paper (damp paper tears easily when pressure it put on it). Fold the endpaper back at the bottom of the shoulder to make sure that it flexes freely and has no "drag" on the first page of the text.



5. Put a metal ruler between the last page of the text and the endpaper (have a green self-healing mat under). The ruler is flush with the foredge. Cut through with a sharp scalpel along the ruler with several light strokes. Also trim any excess off the head or tail of the endpaper at this time using your ruler and scalpel.

Northwestern

Folded Back Endsheet

This technique is used in conjunction with spine repair of large or heavy hard cover books where the boards have been detached. The folded back endsheet provides: a single acid-free flyleaf, a means of board attachment, and very durable inner joint. It can be used for volumes with either one or two detached boards. It can also be used very effectively with heavy volumes where it is advisable to repair the book allowing no bottom square (flush to the bottom). The below description is for two detached boards; modify as necessary for one detached board.

1. Remove all loose paper liners and glue from the spine. Repair and reattach loose pages as necessary to secure the textblock.

2. Tip on single folio acid-free endsheets to the front and the back of the textblock. Be sure the folded edge of the endsheets are flush to the top of the book shoulders. Trim to size.

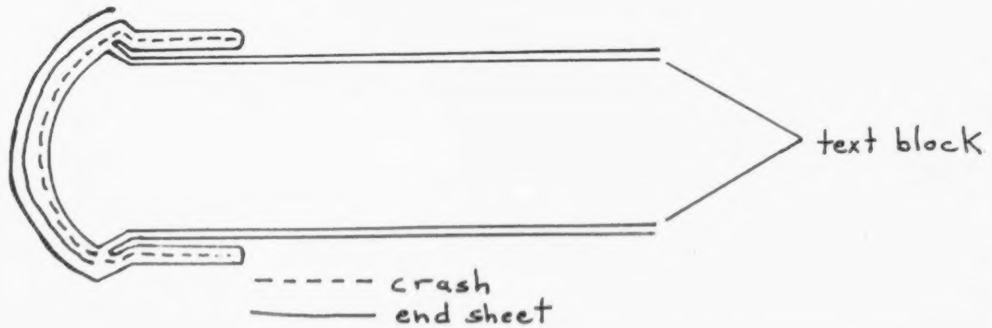
3. Cut a cloth reinforcing strip (crash) 1/2" less than the length of the spine by the spine width plus 2". Apply PVA adhesive to the spine, center the crash on the spine and rub down thoroughly.

4. Apply adhesive again to the spine and under one side of the extended crash. work crash into the joint over the adhesive.

5. Immediately brush the outside endsheet with adhesive, fold back over the extended crash (working it into the joint), and press it down over the spine. Rub down well until adhered.

6. Trim off the excess paper that extends off the spine, then repeat 4 & 5 for the other side of the book.

7. It is possible at this point to simply reattach the loose boards (carefully positioned, either as originally or flush to the bottom) with adhesive and pressure (use press) and then to proceed with the usual spine repair. For a somewhat neater repair, repair the cover away from the textblock and reattach as a complete case*.



Northwestern

* Repairing the cover away from the textblock:

1. Lift the cloth at the inside edges as you would normally.

2. Cut the bookcloth and spine liner to the appropriate sizes.

3. Attach the spine liner to the bookcloth strip with adhesive (do not fold over turn-ins). Draw a pencil line 3/8" away from both edges of the spine liner.

4. Apply adhesive to one side of the cloth strip and carefully position the appropriate board up to the pencil line, slipping the new bookcloth under the lifted cloth. Rub down. Repeat on other side.

5. Apply adhesive to the turn-ins and fold down over the boards. Rub down.

6. Fit the repaired cover over the textblock and rub down the grooves into the joint. Check the fit (if the fit is wrong, it can be adjusted by removing the cloth strip and doing it again).

7. Remove the cover, apply adhesive to the flanges of the folded back endsheet, replace the cover and press for at least 20 minutes.

8. Continue with repair as necessary.

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388

University of Michigan Library
Book Repair Unit

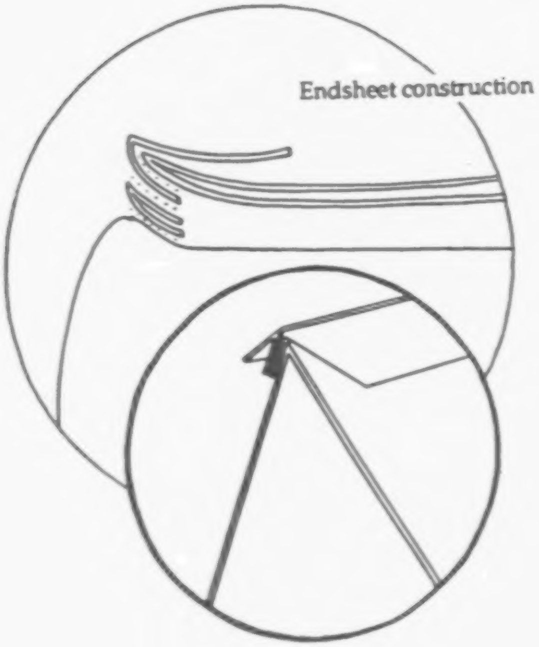
Michigan

✓ REATTACHING THE ORIGINAL CASE

Basic Techniques: Morrow pages 35-49

Variations:

- We use a different endsheet construction. SEE ILLUSTRATION
- Endsheets are trimmed to size before attaching to textblock.
- We use a muslin spine lining adhered with a 50/50 mixture of PVA and methylcellulose.
- We do not use a conjugate pastedown.



Michigan

✓ REATTACHING AN ORIGINAL CASE USING A SPLIT-BOARD STRUCTURE

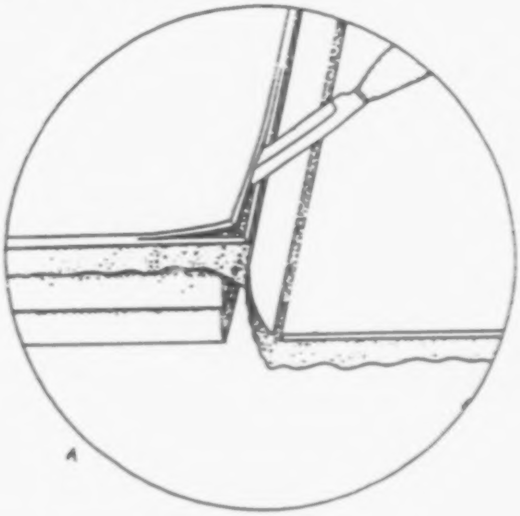
This repair is designed for large, heavy books, where the textblock is intact and the original case is detached or partially detached but intact and in good condition. In addition, the joint in the original case must be large enough to accommodate an increase in bulk in the shoulder which is a consequence of the endsheet construction. Reusing the original case results in a time savings of at least one hour and eliminates the need to label the book.

To prepare the case:

- Remove the old pastedowns mechanically.
- Pull up the turn-ins at the head and tail.
- If the material lining the spine of the case needs replacing, remove and replace with a bristol strip.
- Split the boards of the original case. (Illustration A)

To prepare the textblock:

- Prepare the textblock as you would for a split-board binding.
- Use a double folio endsheet with a linen hinge tipped around the inner folio. (Illustration B)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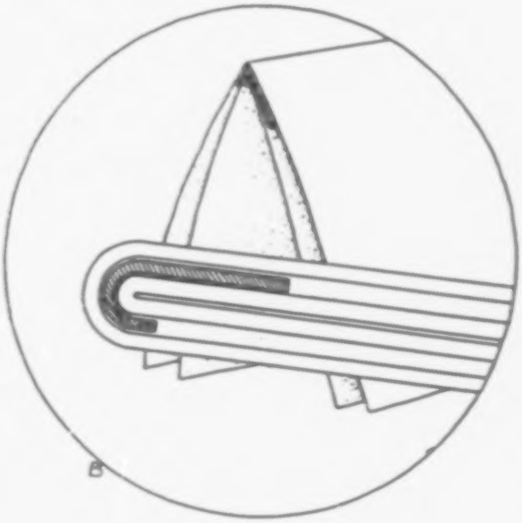
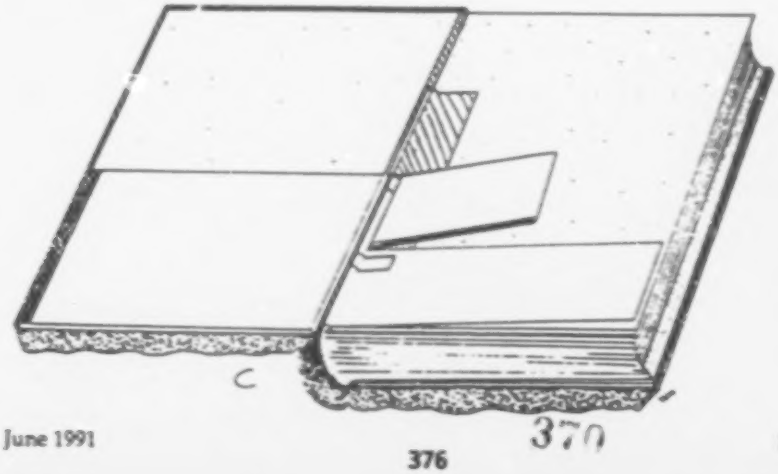

B

To attach the textblock to the case:

- Glue and insert tabs into the split boards at both the front and the back of the volume. Press.
- Glue and turn in the turn-ins as you would normally. Press again.
- Complete in the usual way.


C

Illustrations by Len Muir

Cornell

Cornell University

University Libraries,
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607/255-9687

Overcasting Endsheets

Manual Guide No.26A (1986)

The method of overcasting, by piercing the first and last few pages of a book, has been used as a restoration device for many years. Unfortunately, the method has often been employed in an unsatisfactory manner, binders piercing too deeply, with the holes much too close together. If penetration of the joint (shoulder) is shallow, the holes few (generally no more than five), and the awl little thicker than the thread, the technique may be used to good advantage. The following two overcasting process descriptions are designed for use when (A), a book is being rebound with the original sewing intact, and (B), a book is being restored without rebinding.

Equipment and Materials.

Hand tools only are required, consisting of: knife; bone folder; scissors; glue brush; awl; needle. Materials consist of: linen; endsheet paper; thread; adhesive.

I. Processes: Overcasting a Book for Rebinding.

As a book to be rebound must be provided with new endsheets, this process involves the overcasting of single sheets of endsheet paper onto the front and back of the book, before the addition of the new endsheets.

1. A narrow line of adhesive is applied to the jointed portion of the book, and a single piece of endsheet paper laid into position and rubbed down with a folder.
2. A series of holes are pierced through the joint at a slight angle (see figure Ia). The holes should not normally be closer together than three centimeters. The awl used should not be significantly thicker than the sewing thread and needle.
3. A stout linen thread is stitched through the holes in the pattern shown at: Ib, if the book is to be covered in cloth/buckram; IIb, if the book is to be covered in leather. In both sewing methods, the thread is tied off at the beginning of the first side, is passed across the back at the end of the first side, and tied off at the end of the last side.

   The normal endsheet structure is now applied as appropriate, and the back of the book glued up, ensuring that the thread on the back is glued and flattened in postion.

Cornell

II. Processes: Overcasting a Book for Restoration/Repair.

If a binding must be repaired or restored, the original endsheets should not generally be discarded. The following method enables a sound board attachment to be made, without destroying the integrity of the endsheets. Instead of overcasting onto a single leaf, the process requires the use of pieces of linen or jaconette.

1. A narrow strip of adhesive is applied to the jointed portion of the book, and a strip of linen laid into position and rubbed down with a folder. Normally, the linen strip will be no wider than four centimeters.

2. A series of holes are pierced through the joint at a slight angle (see figure IIa). The holes should not normally be closer together than three centimeters, and the holes no wider than the needle and thread.

3. A stout linen thread is stitched through the holes in the appropriate manner. As noted earlier, pattern Ib should not be used in leather structures, as thread tends to show at the apex of the shoulder, while pattern IIb confines the thread to the inner joint area. Pattern Ib is more efficient and is preferable for all cloth/buckram repairs.

372

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Figure 1. Overcasting a Single Sheet

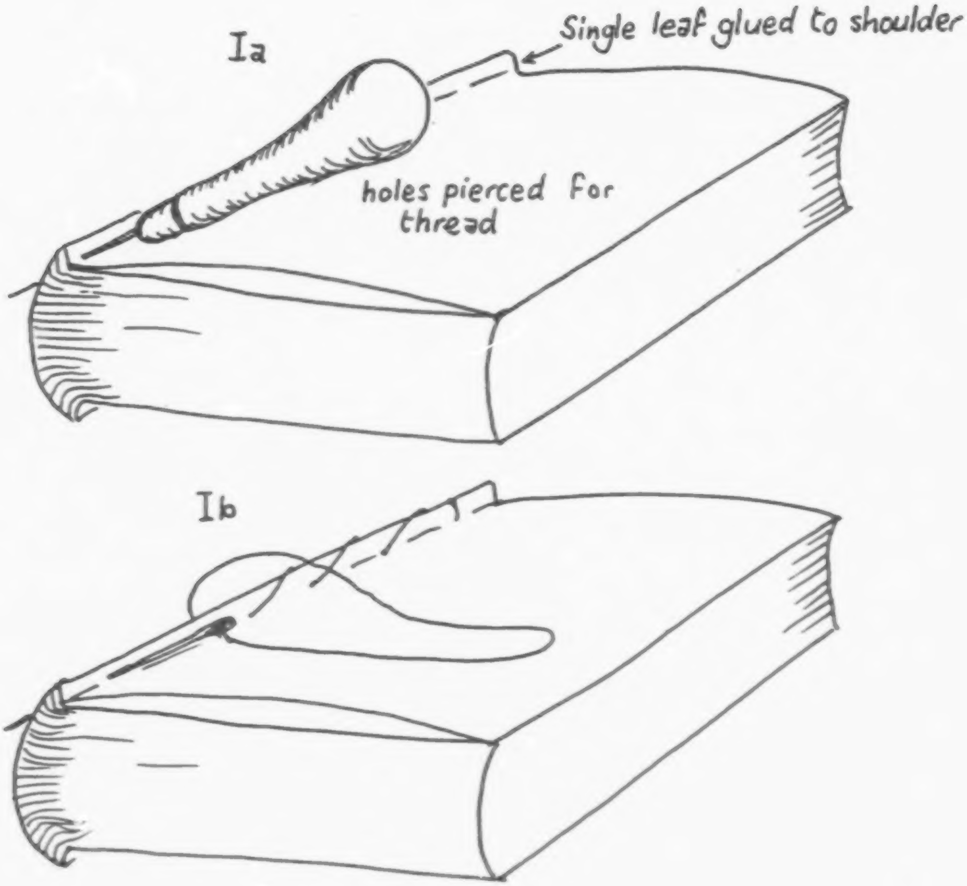
Ia
Single leaf glued to shoulder
holes pierced for thread
Ib

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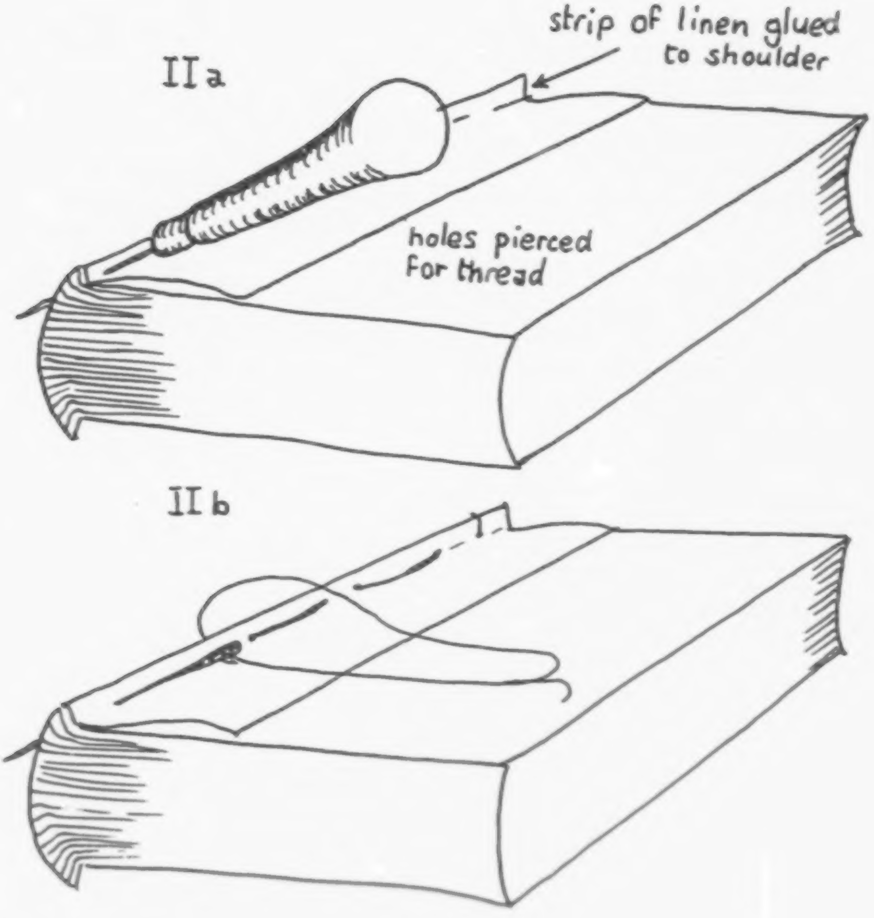
Figure II. Overcasting a Linen Joint.


IIa
strip of linen glued to shoulder
holes pierced for thread
IIb

Illustrations derived from Bernard C. Middleton's The Restoration of Leather Bindings (Chicago: A.L.A., 1969).

Cornell University

Department of Preservation
and Conservation,
701 John M. Olin Library
Ithaca, NY 14853-5301

GENERAL BENCH PROCEDURES FOR BOOK REPAIR

The following procedures are designed to provide simple step-by-step instruction for the three main book repair methods used at Cornell. For more detailed information and instruction see Manual Guides 4A (1986), 25A (1986, 26A (1986), and: John F. Dean, "The Complete Repair of Bound Volumes". *Serials Review* (Fall 1987). Books damaged by reader use are sent into the Repair Unit from all endowed libraries (except for Law) and are first checked for their suitability for repair. As noted in the decision-making chart in "The Complete Repair...", the flexibility of the paper must first be checked by a double-corner fold (i.e. taking a corner of a leaf near the middle of the book and folding it acutely in two directions). If the corner breaks off, the book must be set aside as a replacement candidate.

If the paper is sound, but the book is published before 1850, it should be set aside as a conservation candidate in case more elaborate treatment is needed.

There are three main types of repair: *full*, used for books which are badly damaged by having loose or detached boards and spine, torn or detached endsheets, loose or detached leaves at the front and back of the book; *minor*, used when the spine is loose or detached and the boards and endsheets still firmly attached; *partial*, used when the case is not damaged, but is completely detached from the text block.

It is useful to sort repair candidates into the three categories early in the repair process.

FULL REPAIR

A. *Cleaning*. The backbone of the book is cleaned of all loose linings by peeling or dry scraping. Linings that are firmly attached and not deteriorated should be left in place.

The boards should be fully removed from the text block by careful slitting along the joint, and loose paper tatters pulled away from the book joint area. If there are remnants of cloth or leather joints still attached to the text block, these should also be removed. Any loose cover strands or fringes should be trimmed from the joint edges of the boards.

B. *Preparation of the Text Block*. Any loose leaves at front and back should be tipped into place with either an acceptable glue stick or with a narrow line of P.V.A.

1. Gather materials.
   a. linen - 2 pieces each the height of the text block.
   b. liner - width of the back of the text block and a little longer than the height. Tear length as that measurement is not critical.
   c. inlay (if needed) -same width as liner - height of front board.
   d. buckram - width adequate to provide sufficient lap onto both front and back boards. Height of book plus about 2 cm. at both top and bottom for turn-in.

2. If liner and inlay are not exactly the width of the text block, trim both together to this width.

3. Lay scrap paper along the shoulder of the text block and apply glue to the shoulder. Remove scrap paper and attach the linen to the shoulder. Press in place with fingers and wipe off excess glue.

4. Repeat with other linen on back shoulder. Allow to dry.

5. Drill holes through the shoulder about 5 mm. in from edge of shoulder and at an angle to come out on spine about 5 mm. down. Make three holes for small to regular size books and give for large ones. Repeat for back shoulder.

6. Using linen thread, overcast to hold linen in place. Anchor with a repeat stitch at beginning, holding 2 cm. end until after second stitch is made. Continue on the back shoulder and end with a repeat stitch to anchor. Cut, leaving 2 cm. end.

7. Apply an even coat of glue on the back of the text block and attach the liner even with the edge of the text block. Tuck in ends of linen thread. Rub firmly, wipe off excess glue, and bone down. Allow to dry.

8. Trim ends of liner even with the ends of the text block. Wipe off excess glue, if any.

C. Making the Case.

1. Place buckram right side down on scrap paper and apply an even coat of glue.

2. Center inlay both vertically and horizontally and press down.

3. Place each board about 1 and 1/2 thicknesses of board away from the edge of the inlay. Place text block on back board, wrap buckram and front board over and line up board in place. If the

Cornell

front board doesn't completely cover the text block, open and move the boards slightly further away from the inlay. Be sure that both boards are moved equally.

4. When boards fit, open, remove text block, fold down top of buckram over inlay, then fold up bottom over inlay and bone down both firmly to crease buckram and form head cap and tail cap.

5. Replace text block and close book. Wipe off excess glue along edge of buckram with cloth or rag.

6. Using bone folder, make the joints on both front and back.

7. Set the joints by tipping bone folder down over top and bottom of joint.

8. Stack books foredge to backedge and allow to dry.

9. Lay books in a line with the cover on one book open and supported by the text block of the adjoining book.

10. Gently pull linen back to sewing being careful not to pull it off. This helps the linen lay flat and smooth.

11. After being sure both case and text block are right side up, place scrap paper under linen. Apply glue evenly. Remove paper and smooth linen onto the front board. Wipe off excess glue, and bone down. If linen is stretched a little, do so evenly. Leave open and allow to dry until the glued linen does not feel cold or damp to the touch.

12. Repeat on back of book.

D. Titles on Spines.

1. If the old spine is still legible and intact, trim evenly with paper cutter.

2. Remove excess paper or cardboard from back of old spine. Separate with knife blade if necessary, or scrape.

3. Apply glue to old spine, place on new spine and remove excess glue with a piece of cloth or rag.

4. Place scrap paper over old spine and bone down.

5. If the old spine is illegible or too badly damaged to use, photocopy the title either reducing or enlarging to appropriate size, and cut to fit on the new spine. Apply as above.

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E. Completion.

1. If corners of the boards are tattered, apply glue and smooth down with fingers to consolidate the cardboard and buckram covering.

2. Document treatment according to current policy.

3. Record treatment for statistical purposes.

4. Return to shelves.

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PARTIAL REPAIR

Recase

A. Cleaning. The backbone is cleaned as indicated under "full," with care being taken to avoid cutting into the joint area.

B. Preparation of Text Block.

1. Gather materials.
    - a. linen - 2 pieces each the height of the text block.
    - b. liner - width of the back of the text block and a little longer than the height. Tear length as that measurement is not critical.
    - c. inlay (if needed) - same width as liner - height of front board.

2. If liner and inlay are not exactly the width of the text block, trim both together to this width.

3. Lay scrap paper along the shoulder of the text block and apply glue to the shoulder. Remove scrap paper and attach the linen to the shoulder. Press in place with fingers and wipe off excess glue.

4. Repeat with other linen on back shoulder. Allow to dry.

5. Drill holes through the shoulder about 5 mm. in from edge of shoulder and at an angle to come out on spine about 5 mm. down. Make three holes for small to regular size books and five for large ones. Repeat for back shoulder.

6. Using linen thread, overcast to hold linen in place. Anchor with a repeat stitch at beginning, holding 2 cm. end until after second stitch is made. Continue on the back shoulder and end with a repeat stitch to anchor. Cut, leaving 2 cm. end.

7. Apply an even coat of glue on the back of the text block and attach the liner even with the edge of the text block. Tuck in ends of linen thread. Rub firmly, wipe off excess glue, and bone down. Allow to dry.

8. Trim ends of liner even with the ends of the text block. Wipe off excess glue, if any.

C. **Reattachment of Case**.

1. If inlay is needed in spine area, apply glue to new inlay and put in position. Bone down.

2. After being sure both case and text block are right side up, realign text block with the end sheets of the covers.

3. Lay books in a line with the cover of one book open and supported by the text block of the adjoining book.

4. Gently pull linen back to sewing being careful not to pull linen off. This helps linen lay flat and smooth.

5. Place scrap paper under linen at front joint. Apply glue evenly. Remove paper and smooth linen onto the front board. Wipe off excess glue, and bone down. If linen is stretched a little, do so evenly. Allow to dry.

6. Repeat at back of book.

7. Close book and check to be sure case properly encloses the text block. Return to shelves.

3/18/92

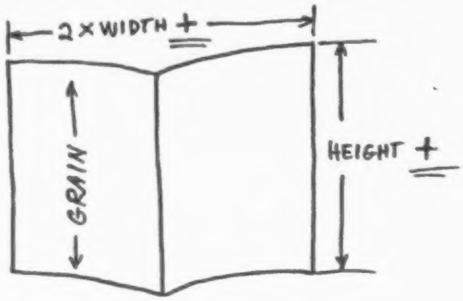
NEW ENDPAPERS - SEWN ON

Ohio State

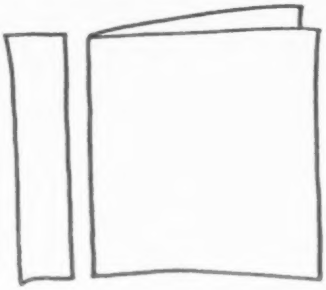
ENDPAPERS WITH A CLOTH HINGE

1. Choose paper that is compatible in weight and color to the bookblock paper.

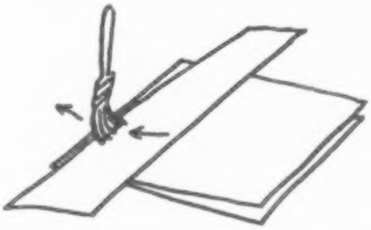
2. Cut the paper twice the width of the bookblock plus several inches and slightly higher than the bookblock. The grain must be parallel to the height.



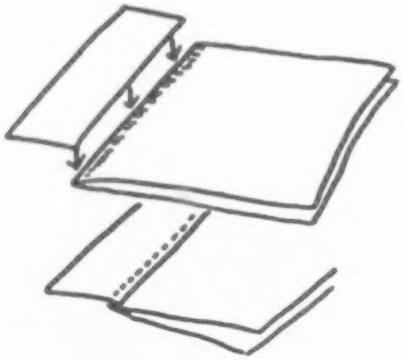
3. Fold the sheet in half parallel to the grain and crease. Correct the height measurement to be exactly the height of the bookblock.



4. Cut a piece of airplane linen or lightweight bookcloth the height of the folded endpaper by 2".



5. Mask off all but 1/8" along the fold of the endpaper and apply PVA mixture all along the exposed area.

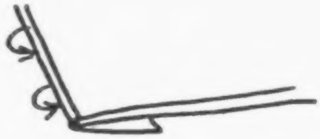


6. Remove the mask and place the upper edge of the cloth strip exactly over the area that has adhesive on it and press down firmly. The cloth will extend over the edge of the fold as illustrated.

Note: If using bookcloth that will match the covering material, place the "front" or finished side of the cloth down on the edge that has adhesive on it,

Ohio State

7. Place the endpaper with attached hinge under a weight. When it is dry, fold the cloth over the endpaper fold and crease with a bone folder. The unit is ready to be sewn onto the book.



ENDSHEET REPLACEMENT

Candidates:

Endsheets torn or damaged anywhere along the hinge.

Materials:

- scalpel
- microspatula
- bone folder
- cutter or board shear
- ruler
- scissors
- skife knife
- soft cloth
- paste
- 2:1 PVA/wheat paste mixture
- glue brushs
- thin brush for water-tearing
- water
- book press or weights
- pressing rods/boards
- support boards
- Japanese tissue
- endsheets
- blotter paper
- polyester web
- waxed paper
- scrap paper
- sille board
- sanding blocks/paper

Note: Prepare new spine before fabricating endsheets, but do NOT attach new spine to book.

Procedure:

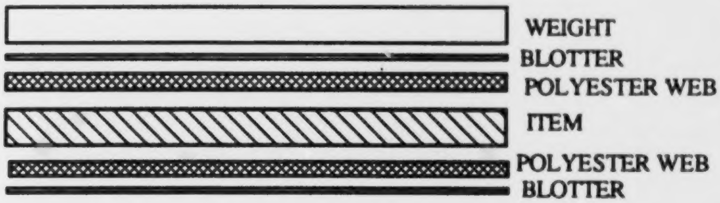
1. Remove old endsheet(s). First remove flyleaf--hold first page of text securely as you gently pull back fly leaf, tearing along the hinge.

2. Select new endsheets--choose papers comparable to tone and weight of textblock.

3. Place endsheet flush with head of text block and mark at tail for height dimension. Mark which endsheet is front and back if both are being cut simultaneously. Trim excess at board shear.

4. Select Japanese tissue for hinge:
   - tissue should be similar in weight (not heavier than) and tone to text;
   - tissue should be 1/2" (12mm) wide and 1/2" (12mm) longer than the endsheet.
   - water-tear strip of tissue to create soft edges.

5. Mask off one half of the tissue strip with scrap paper. Glue out exposed half of tissue and carefully place it on the folded edge of the endsheet. Allow to dry under weight between polyester web and blotters. Repeat for the other endsheet, if necessary.



6. Remove old pastedown from boards: Using microspatula and/or skife knife, remove at least 1/8" (3mm) of endsheet at turn in. Remove any information or design that will be visible through new endsheet. Remove bookplates or pockets using microspatula and sand rough areas until they are smooth.

7. Trim Japanese paper hinge on endsheet(s) to exact height.

8. Place endsheet on text block even with the top and bottom to check dimensions. Shape endsheets to contour of shoulder. Create appropriate sized shoulder by folding endsheet shoulder area over workbench edge.

9. Place endsheet on a scrap paper with Japanese tissue facing up, mask off and glue out remaining half of tissue. Leave a small bead of glue on the edge of the shoulder of endsheet.

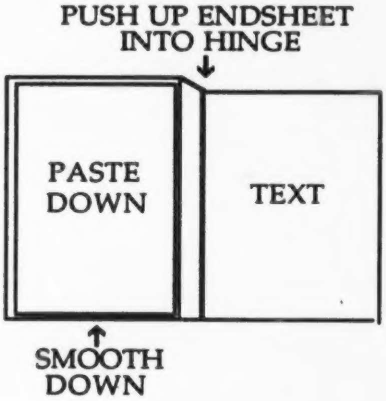
    - Lift from the scrap paper and hold endsheet at 90 degrees over gutter of book, leaving 1/8" next to gutter and press tissue gently onto page.
    - Lower and slide endsheet over into position (glue will hold endsheet into place) making sure to properly align the endsheet onto the textblock. Gently lift the new endsheet not more than 90 degrees and place a piece of polyester web in the hinge area to prevent adhesion of flyleaf to text page.
    - Bone the shoulder and gutter impression back into the endsheet.

10. Complete spine repair as necessary.

11. Trim off excess width of ensheets to match size of textblock:
    - Place a ruler between the textblock and the endsheet. With the cover closed, align the ruler along the edge of the textblock.
    - Keep the scalpel blade firmly against the edge of the ruler, and carefully trim off excess width. DO NOT cut into the coverboard.

12. Place clean scrap paper between pastedown and flyleaf. Glue out paste down. Remove scrap. Close book and bone in hinge.

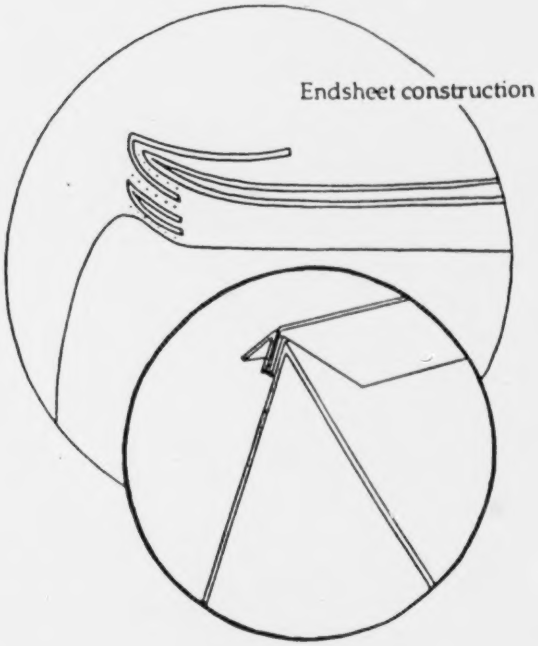
13. Open cover (NOT more than 90 degrees or endsheet will stretch.) Rest pastedown flat on the table with text block resting against your stomach. Smooth out endsheet with soft cloth.



14. Repeat for other endsheet as needed.

15. Insert moisture barrier in book between pastedown and flyleaf, and between flyleaf and text block.

16. Place the book in press or under weights using pressing rods in the hinge area for 30 to 60 minutes.

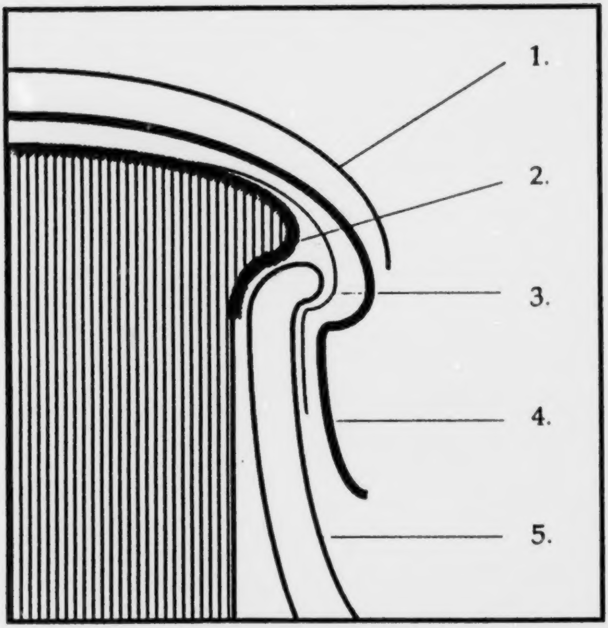


✓ NEW CASE

Basic technique: Morrow pages 52-63

Variations:

- Corners are mitered using Cockerell method, Bookbinding and the Care of Books pages 164-165.
- We add cord at the turn-ins when the book does not have endbands.
- We use a different endsheet construction. SEE ILLUSTRATION
- Endsheets are trimmed to size before attaching to textblock.
- We do not use a conjugate pastedown.
- Paper title labels are made using a Macintosh computer and a laser printer.



1. paper back lining 2. pasted and brush stippled kozo fiber paper lining 3. kozo fiber paper guard tipped to the endpaper and bonded to the back of the text 4. tightly woven cambric bonded with PVA adhesive 5. single folio endpaper

Collection Maintenance Repair for Publishers' Cased Books

Trade and publishers' bindings, unlike library bindings, are not constructed for long-term library use. Because they are manufactured with economy and retail appeal in mind, it is unreasonable to expect these bindings to perform well in libraries, and some do not.

When trade bindings prove inadequate there are various options for the preservation librarian. The standard recasing or rebinding provided by library binders may be preferred as the most durable and least expensive solution. Library binders can also provide double-fan adhesive rebinding for paperbacks to toughen them for use in circulation.

Another option is collection maintenance repair and reinforcement, the approach described here. Collection maintenance can be provided in-house or by a specialized commercial facility such as BookLab. The needed repair and reinforcement is simple enough. However, the requirement for an organized workshop and the crucial need for well directed technicians can make in-house collection maintenance impractical in some libraries.

Collection maintenance repair and reinforcement is of growing interest to librarians, and some model programs and helpful publications have been generated. As with most preservation problems a range of responses is needed. Collection maintenance repair operations should be carefully integrated with other preservation procedures such as microform reformatting and library binding.

Standards for Collection Repair and Reinforcement

Book repair and reinforcement methods for use on circulating books should provide for (1) text consolidation or reinforcement of leaf attachment, (2) reinforcement of the cover-to-text attachment, and (3) toughening of the cover. All three types of reinforcement must be present in a good repair. Repairing the cover is of little value if the text is going to fall out of its case or pages are dropping out from a break in the textblock. It is also important that the reinforcements should be made without causing subsequent damage to the action of the text leaves.

Collection maintenance repairs must be quick, simple and inexpensive, but are not to be done at the expense of good workmanship or the quality of the repair materials. Materials must be durable and stable and the finished repair must be neat in appearance. Workmanship can be judged in the bonded areas where the adhesion must be neat and secure. There should be no looseness or buckling in the adhered linings or hinges as the book is opened.

Collection Repair and Reinforcement for Cased Books

Intact publishers' cased books can be reinforced by a simple method referred to as "tightening the hinges". This method involves application of adhesive between the joints of the cover and the shoulders of the textblock. To do this the adhesive is applied with a knitting needle inserted between the cover and textblock. Subsequently the book is pressed between metal edged press boards. Tightening the hinges is a quick and effective method to reinforce the cover-to-text attachment of a cased book. However, the book must be in good condition as this method does not strengthen the text consolidation nor does it toughen the cover.

For damaged publishers' cased books all three repair requirements must be met. Various repair methods provide these requirements and feature either a sewn or unsewn endpaper with the option to reinforce or replace the original cover. The books must be disassembled and the textblock and cover repaired as separate components. The process is completed by reattachment of the cover.

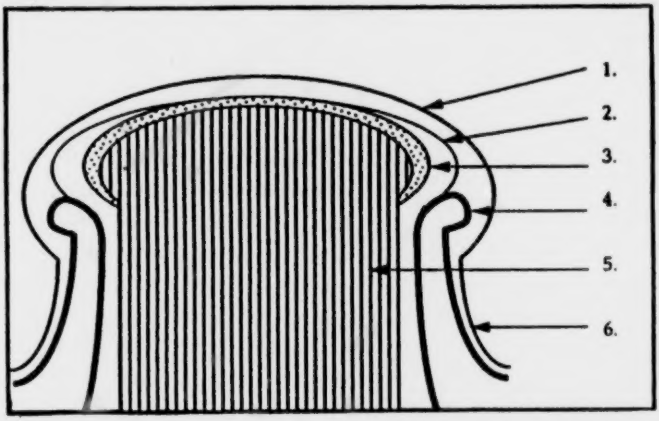
Materials and Equipment

The endpaper stock should be durable and alkaline. A suggested endpaper stock is 70 lb. text weight Mohawk Vellum beige. Other materials include methyl cellulose gel, wheat or rice starch paste, a synthetic PVA adhesive such as Aabbitt Jade 403, various colors of book cloth for reinforcement of original covers, acrylic sized buckram coth for production of replacement covers, and 10 or 20 pt. alkaline paper for spine inlays.

Equipment needed includes a small lying press on a stand which will allow access to the fore-edge of the textblock, brass edged press boards to fit the lying press and a board shear or paper cutter with a clamp. Tools needed include a metal straight edge or ruler, a dull paper knife, a sharp trimming out knife such as the Dexter slide blade knife, scissors, large sanding stick, separate brushes for application of paste and PVA adhesive, a metal microspatula, a Teflon lifting spatula and a bone folder.

Cased Book Repair Using an Unsewn Endpaper

The cased book repair using an unsewn endpaper can be represented by the BookLab collection maintenance repair. This particular repair method is based on an unsewn, single folio endpaper. A guard of kozo fiber paper is attached to this endpaper folio producing a flange which is bonded to the back of the textblock. This arrangement permits a full, nondamaging opening between the endpaper and the outer printed page.



1. tightly woven mull bonded with PVA adhesive 2. kozo fiber paper guard tipped to the endpaper and bonded to the back of the text 3. pasted and stippled kozo paper lining 4. new endpaper 5. textblock 6. position of foldback pastedown flange used when the original cover is reattached

Textblock Repair Steps

1. Separate the textblock from the cover; fully open the board and cut through the hinge folds of the pastedowns and the underlying crash with the dull paper knife. Any cord sewing supports should be carefully pulled free from the board leaving the stubs of the cords intact.

2. Strip off any loose lining paper from the back of the textblock and scrape the back with the paper knife to clean it. Follow this cleaning with an application of methyl cellulose gel to soften any hardened glue film that may remain. When softened, carefully remove this residue with a dull knife and wipe the surface with a damp towel. Seal any stubs or slips of sewing cords onto the back of the textblock. Additional mending or guarding can be done at this point. Finally, strip off the outer, pastedown conjugate flyleaves and shape and position the text in a small lying press.

3. Cut a piece of kozo fiber paper for the initial back lining. This lining should be in excess of the width of the textblock back and should lap over onto the shoulders, reinforcing the attachment of the outer leaves. Apply paste to the text back and carefully lay

the kozo paper onto the back, then stipple the kozo into place using a strong, dry brush. Pamphlet restitching of loose sections can be done through the dried kozo lining.

4. Prepare the stacked endpapers with a square trim across the head. Precrease the shoulder in the endpaper with the kozo guard in an orientation facing the textblock. Apply a light film of PVA adhesive to the back of the text in the shoulder area, position the endpaper with its fold in registration to the fold of the outer section and adhere the kozo flange across the back of the text. Trim out the tail and foredge of the endpapers using a thin ruler.

5. With both endpapers attached and the textblock well formed in the backing press, apply PVA adhesive to the textblock back. Then center and adhere a tightly-woven starch sized mull, cut slightly less than textblock height and slightly wider than the back. It should overlap the pastedowns to a distance slightly less than one-sixth of the textblock width.

6. An additional paper lining can be applied if needed to support the poening of the text.

The original cover can be repaired and reused or a new case can be made. When the original cover is reused the pastedown leaf should be folded back on itself to produce a 1/6th book width flange. This flange will not cover book plates or circulation data and will not distort the original board.

Cased Book Repair Using a Sewn Endpaper

An unsewn endpaper repair is best suited to later publishers' cloth cased books which were manufactured with a tipped endpaper. Publishers' cased books with a sewn endpaper, which are common in 19th century work, can be reconstructed with a sewn endpaper. The reconstruction may involve. mending and resewing of the original endpapers with the boards attached or replacement, double folio sewn endpapers may be provided. If the textblock sewing is intact the endpapers can be sewn on with a pamphlet stitch through the mull. If outer sections must be resewn as well, link stitching is used. Except for the stitching, the forwarding steps follow those used with the unsewn endpaper repair.

Original covers can be reused either following repair of the book or following attachment of a new spine in instances when the boards are left attached to mended endpapers.The covers of tube hollow leather bindings can be reconstructed using book cloth maintenance repair techniques. Another option for leather covered books is conservation rehinging for tight joint construction bindings. With deteriorated and powdery leather covers, replacement with new cloth covers using case construction reattachment may be the most practical alternative.

Conclusion

Extending the service life of circulating collections through the use of collection maintenance repairs is not a new approach. Retailers have long offered repair materials to librarians, and many collections are filled with these tape-based repairs. The simplicity of application and production potential of these products are admirable. Unfortunately the tape-based repairs have not met the basic performance standards for maintenance repairs and the problems have not been solved.

Preservation librarians now require maintenance repairs to fulfill basic standards such as those mentioned in this BookNote. The repairs must work and must greatly extend the service life of the materials. Evaluation requires occasional surveys of repaired volumes. This form of inspection and documentation should be an ongoing activity for in-house preservation staff. Preservation librarians determined that conventional tape repairs were counterproductive. Now they must continue their critical review of the alternative methods.

MIT

REBINDING

INTRODUCTION

Damaged books in the MIT Libraries fall into two general classes: modern publishers cloth bindings and older materials in cloth and leather. These frequently deteriorate along the spine hinge so that the text block becomes loose and the boards are separated from the case. These books can be rebound by Acme or repaired in-house, depending upon the condition of the paper and boards. The initial decision that an item deserves treatment is made in the divisional library, where staff also make a recommendation for in-house or Acme binding. The staff in the Binding and Repair Section are responsible for the final decision about actual treatment procedures. Because staff and funds are limited, priority for treatment should be given to items in circulation, rush items needed in less than one week, reference books, or items with significant research value.

Books with flexible paper, adequate margins, damaged boards, and broken sewing or loose single pages are typically sent to Acme for rebinding according to criteria outlined in the MIT *Binding and Repair Guidelines* All work is done according to the LBI Standards.

If the boards are in good condition, the book is recased, reusing the original boards and original endpapers (see the preceding section for a description of procedures for this type of repair).

The majority of items in need of more extensive repair are older and require more complex treatment. Often Acme will not handle them because the paper is not flexible enough to withstand mechanized procedures, and yet the books can be rebound if the work is done by hand. New materials with flexible paper may also need to be treated in-house to save endpapers, illustrations, or the original case bindings. These volumes need to be rebound, either by reusing the original endpaper/boards or by adding new endpapers and boards. The original signatures are retained whenever possible.

Rebinding procedures at MIT will follow several general conservation principles:

> No straight PVA adhesive will touch the unlined backs of signatures of the text block. Spines are lined with paste (wheat starch or methylcellulose) so that any further material can be removed with water. Adhesive, oversewn, and modern bindings which already coated with PVA can have "mix" applied directly.
>
> Endpapers are sewn on through the fold whenever there are signatures.
>
> The hinge is reinforced with linen (airplane linen or cambric). The cloth can be sewn into the endpaper (when there are signatures) or applied to the back of the spine (when endpapers are tipped on) so that the cloth project 3/4 inch onto the endpaper.
>
> The spine is lined with an appropriate weight acid-free paper (two layers may be needed for heavier books).
>
> The case binding has a hollow back and grooved joint set in place with metal-edged boards. Heavy books may need the additional support of a hollow tube.

MIT

Preparation of the text block :

1. Remove the cover and extraneous endpapers
2. Remove the spine linings, either dry or by using a methylcellulose poultice
3. Mend and resew torn or loose sections and resew any breaks in the text block (see section on Leaf Attachment)
4. Reinforce the text block by pasting and shaping the spine.
5. If the text has its original signatures, apply an initial lining of pasted medium or heavy weight Japanese paper that extends 1/4" onto the first and last signatures, creating a free guard.

Resewing:

Taking a book apart and resewing involves a more extensive investment of time, especially if the pages are damaged and need to be guarded. Approval of the Binding and Repair Supervisor or the Preservation Librarian is required before undertaking such work. Sewing should use the original sewing stations whenever possible by sewing onto either tapes or cords. See the procedures in Young, pp. 82-96.

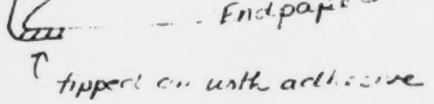
Endpaper construction:

Often endpapers are made of an inferior grade of paper or are damaged because they receive the heaviest wear. It is preferable to replace old endpapers with new acid-free endpapers.that protect the text unless the originals contain signature, printed information, or decoration that is integral to the book. There are two basic types of endpaper construction

Tipped-on endpapers are used for modern adhesive bound books or for oversewn volumes. The title pages of oversewn and older books should be reinforced with Japanese paper before tipping the endpaper on. If the volume is heavy (for example, an oversewn journal volume with coated paper over 2" thick), it may be necessary to stab sew the endpapers onto the first and last signatures, using prepared zig-zag endpapers from Acme. Spines are lined with super or linen 2" wider than the spine, followed by a spine strip of acid-free paper. If the book is heavy (over 1/2 -2 inches thick or has heavy coated paper), line the spine with a hollow tube. Cloth and paper should be appropriate to the weight of the text block.

Sewn-on endpapers.

The Library has commercially produced endpapers reinforced with cloth for use with most materials. For older materials, you may want to use a different color paper or use a separate board paper with exposed linen joint. These should be made as follows:



MIT

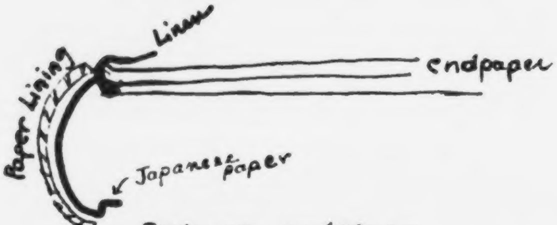
Sew the endpapers to the first and last signatures using a link stitch. If one or two other signatures are also loose, begin at a solid portion of the text block and consolidate the sewing of the front and back. Line the spine with acid-free paper. If the book is heavy, line the spine with a tube.

Casing in:

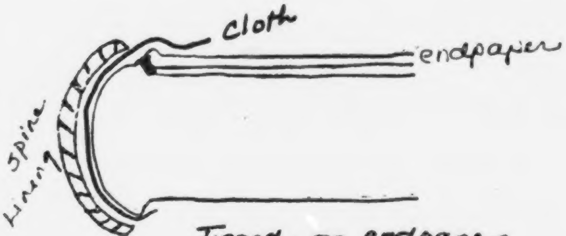
In most instance, you will follow the casing-in procedure describe in Dyal and Morrow, pp. 69-80 (excluding the title stamping).

When the text block is not square or you want to mount the original board papers, glue in the hinge only, following the descriptions in Laura Young (see following sections).

The completed case structure appears as:



Sewn-on endpaper



Tipped-on endpaper

There are other variations on case bindings that you may choose to use because of the age, size, or original construction of the damaged book. Be certain that you modifications follow the general principles outlined above. If you are uncertain, check with the Head of Binding and Repair before undertaking treatment.

Guides to binding available for consultation at MIT include

Useful hints and suggestions appear regularly in *Abbey Newsletter* along with reviews of new publications in the field.

16

Case Replacement

(Including Textblock Consolidation and Replacement of Endsheets)

The section provides three examples of treatments to replace worn cases with new cases. The treatment builds on those described in the section on recasing, with the exception that a new case is provided, either made in-house or at a library bindery. Case replacement is an option when retention of the original publisher's case is not, for a variety of reasons, considered possible, desirable or cost effective.

Case Replacement
(Including Textblock Consolidation and Replacement of Endsheets)

Conservation Binding Guidelines for Recasing - Cornell

New Case - Ohio State

Preparation for New Case - Berkeley

Cornell University

University Library,
Department of Conservation,
701 John M. Olin Library
Ithaca, NY 14853-5301

607/255-9687

Manual Guide No.35A (1988)

CONSERVATION BINDING GUIDELINES FOR RECASING.

The following Guidelines are designed to act as general specifications and procedure instructions for the recasing of books. In general, the books will have sound paper, good sewing, and will be of lasting value. For this reason, the methods and materials are selected for their reversibility and non-damaging nature.

The guidelines are divided into three main areas: Preparation, Forwarding, and Finishing. The descriptions of processes apply whether the work is done in the Library or by a commercial binder. It is expected that exceptions will be dealt with in the spirit of the guidelines and that they will be applied sensibly.

1. Preparation. This category includes all processes up to, and including, gluing up the spine, and consists of seven basic steps. It is most important that the instruction slip be followed, particularly in regard to the saving of inscribed fly leaves, bookplates, etc. However, if in doubt, save it!

Collation.

Before proceeding with the removal of the original binding structure, carefully collate the book to ensure that it is complete. Check the beginning matter (half title, title, dedication, preface, table of contents, etc.) up to page arabic number five, then commence to "count off" the leaves in groups of five by fanning, each group beginning with a page number ending in five (e.g. 5-15-25--35...). A missing leaf will become immediately evident. Separate plates should be checked by list or table of contents. During the collation process, the eye should be alert for tears or missing corners, which should be marked by insertion of a japanese tissue strip.

1.2. Removal of Outer Binding.

The original binding should now be cut away by carefully slicing through the open board hinge with a knife. While most endsheet structures should be discarded, care should be taken to retain notes or signatures and non-brittle marbled fly leaves. The

Cornell

1.3. Page Repair.

The tears noted during the collation process should be repaired at this stage before the linings are soaked off the back (see next step). Two methods of repair may be used: wet, which involves the use of japanese tissue strips and a "wet" adhesive such as paste or methylcellulose; dry, which involves the use of L.C. heat-set tissue. Generally, the wet method should not be used if the paper is porous as a result of poor sizing, as a repair is likely to produce a ring stain or "tidemark." It is most important that page repairs be done before the back linings are removed, as the sewing may split during the repair process if the back is unsupported.

1.4. Removal of Back Linings.

Making sure that the loose boards are firmly in place, a damp sponge is dabbed onto the backbone to thoroughly dampen the linings, followed immediately by a generous layer of inexpensive paste such as Stek-O. After the paste poultice has sufficiently softened the linings, they are peeled away with a blunt knife, which should also be used to scrape away as much of the original adhesive layer as possible. Great care must be taken to avoid damaging the sewing structure, particularly if the cords or threads are raised. When clean, the sponge should be employed to smooth out the back surface. At this point, it is important to make sure that books are pushed into the correct shape to allow them to dry in an even, square condition.

1.5. Leaf Consolidation.

Loose fly leaves should now be attached by hinging with Japanese tissue. It is important to ensure that the first and last sections are firmly connected to the text block; if loose, they, and the fly leaves, should be lightly overcast through a new single endpaper leaf (see Overcasting, Manual Guide No.26). Adhesive should be paste, methylcellulose, or mix (see Adhesives, Manual Guide No.29).

1.6 Endsheet Attachment.

The single folio, strip-lined, acid-free endsheet should be attached by laying a thin line of adhesive (approximately 2 m/m or 1/16") along the back edge with

Cornell

a guard sheet, and rubbing the endsheet down into the backing groove with a folder (see Tipped-on-Endsheet appendix Manual Guide No. 13). It is important that the adhesive line not exceed or equal the width of the Japanese tissue hinge. Excess endsheet is carefully trimmed to the book edge.

1.7. Gluing Up.

The final preparation step is the application of an adhesive layer to the backbone. To ensure flexibility (though with some loss to reversibility), a PVA mix may be brushed on, ensuring that loose threads or loops from overcasting are firmly secured. Information on size, color, etc. must now be pencilled onto the front endsheet as a quick guide for the later forwarding processes (see attachment).

Variations to the basic steps are usually the result of minimal sewing breakage and/or the need to provide additional endsheet reinforcement for large and heavy books.

2. **Forwarding**. This category includes all the processes from rounding and backing up to, and including, case making. In all forwarding operations, it is useful to remember that many books published before 1850 are not "square," that is, the edges are not necessarily parallel or even. As this category of binding precludes the trimming of edges, some accommodation should be made in fitting and cutting.

2.1 Rounding and Backing.

Because of the tenuous nature of some of the original sewing structure, it is most important that rounding and backing be done with great care, preferably by light hand rounding and rollerbacking. If appropriate, the back may be lined with stretch cloth before backing to avoid thread breakage.

Rounding should be accomplished by gently shaping the book into its original round with light taps of the hammer. Backing should produce a shoulder similar in depth to the original, but no higher than the thickness of the cover board. The shoulder should not be too acute to avoid breakage at the joint.

2.2 Endbanding.

If endbands are to be sewn into the book, they should be sewn at this point.

Cornell

2.3 Back Linings.

All books in this category should have both first and second linings, irrespective of thickness. The first lining should be a cotton stretch cloth (similar to Holliston Mills unbleached stretch cloth), one centimeter (3/8") shorter than the book, to extend no more than four centimeters (1 1/2") onto each endsheet. The cloth should be glued with PVA and set well into the joint.

The second lining should be kraft paper (such as Process Materials Archivart Wrapping Paper) the same width as the back and same length as the book height. As with all lining and covering materials, the machine direction (or grain) should be parallel with the joint. The second lining should be glued with PVA and adhered firmly to the back.

2.4 Cutting Boards.

The Davey Red Label boards should be cut on the correct grain, and should be appropriate in thickness to the height of the shoulder and thickness of the book. In general, .074" and .098" will serve for most books. As previously noted,
older books may not be square, so boards may have to be cut to accommodate an uneven edge. Although squares should be appropriate to the size and thickness of each volume, they may be standardized at 2.5 millimeters (3/32"). This means that each board should be .5 centimeter (3/16") longer than the height of the book, thus a book 33 centimeters (13") in height, would have a board 33.5 centimeters (13 3/16").

2.5 Cutting Cloth.

The buckram of choice is starch-filled (similar to Joanna Western Mills D-Grade buckram). The colors should be as specified according to sample book, and the size should allow for a 1.5 centimeter (5/8") turn-in. In cases of unusually thin volumes, a bookcloth rather than a buckram will be specified.

2.6 Covering.

The case should be made in the normal way, but the guage should be checked to ensure that the standard dimensions are appropriate to the size of the book. If necessary, the glued cloth should be drawn onto the positioned boards to ensure an accurate fit.

Cornell

Corners should be cut at a 45° angle rather than made "library style", and the squares should be uniform at 2.5 millimeters (3/32") on all three edges. The joint should be even, appropriate to the square size, and (eventually) well set-in.

If endbands have not been sewn, a reinforcing strip (string or paper core) should be placed at the head and tail of the case, the buckram set evenly around it.

2.7 Finishing.

All lettering should be in gold and should follow the general guidelines set forth in the manual guide (see Lettering Books and Boxes, Manual Guie No. 23).

When the case is glued down, the squares should be even, and care taken in opening the endsheets after pressing. Any glue spots should be removed from the cover and edges. Original bookplates and other materials set aside to be saved from the original binding, should be replaced in the book.

Ohio State

New Case

The sequence of steps to be followed when making a new case are:

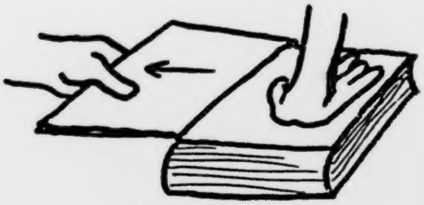
1. Prepare the BB
2. Measure and make the case
3. Attach case to the BB. Stamp the title label.

* The steps that have an * in back of the number will have additional instructions that are found in the section covering specific technics.

Preparation of the BB

1.* Original covers are removed from the BB. Steam off old spine linings.

2. Holding the BB down remove acidic or brittle endpapers by gently pulling them away at a 180° angle.



3. * Make necessary page repairs - such as, hinge in loose pages and plates, (back if necessary), repair torn pages, guard loose signatures.

4. * a. If the BB sewing is strong and not broken attach a "V" hinge to the first and last signature.

* b. If signatures are to be resewn to the BB, attach a loose guard to the first and last signature.

5. * Attach tapes to the spine with PVA mixture. One side of each tape is aligned with an existing sewing station. The kittle stitch is ½" from the head and tail.

6. * Measure and cut endpapers and attach a cloth hinge.
Score endpapers ¼" from fold and crease. This will allow the endpaper to fit snugly into the shoulder of the BB.

Ohio State

7.* Sew on endpapers.

8.* Attach "V" hinge to the underside of the endpaper. Pull it toward the foredge until the fold aligns with the other folds of the BB.

9.* Attach premade endbands or endbands made from natural linen or those that are sewn on by hand.

10. Attach spine lining in this order:
    a. Cut Hosho to fit between the tapes and endbands and attach with wheat paste.
    b. Cut spine lining of Permalife or Mohawk the width of the spine by the height of the spine plus a little extra. When attached trim off excess at the top of the endbands.
    c.* If necessary, put on a hollow tube.

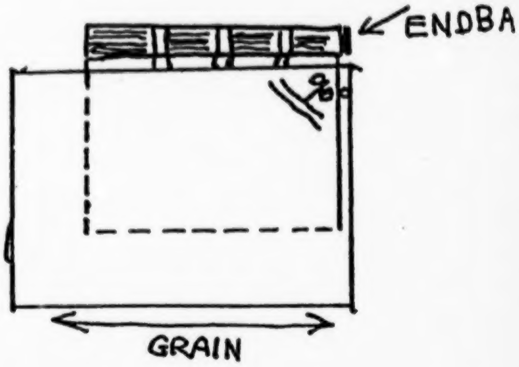
11.* Trim foredge of endpapers.

12. Attach protective waste sheet at the front and back of the BB so that endpapers will not get smuged or dirty from handling.

Making a New Case

Preparing the boards:

1. a. Choose board that seats well into the BB shoulder. The rule of thumb is thinner board for small books, thicker boards for larger books. The grain is parallel to the spine. Square one corner of the board and fit it into the shoulder so that it is flush with the top of the endband. Mark the opposite side to also fit flush with the endband and cut. Put board in place again to check the fit.



Ohio State

1. b. Mark the foredge so that the square is equal to the square at the head and tail, and cut.

   c. Make a final check and if the board fits well cut a second board to the same measurement.

2. Lightly sand off the sharp points for the two foredge corners. Don't take off too much - they corners are not to be round.

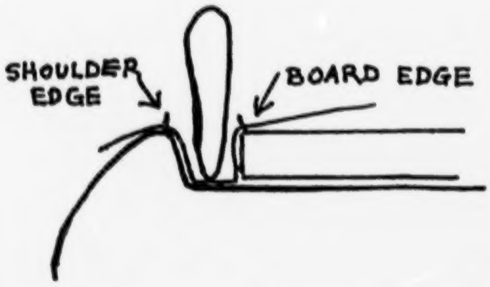
3. Measuring and cutting the Spine

   * a. For rounded and backed BB. Measure the exact width of the spine by the height of the boards. Use bristol or Permalife cover stock.

   b. For flatbacked BB. Use a slightly thinner board than the cover board. 40 pt Lig-Free board usually works well or lightweight binders board. The spine width is the same or slightly wider than the BB. This may be a bit thicky because it's a matter of "fit". Place the BB between the boards and hold the spine in position and feel how it is in relation to the boards. Adjust the width if necessary.

4. Measuring the Joint Distance

   Place the board in position on the BB and weight it down so that it won't move. Attach a strip of paper to the board with tape. Mark the edge of the board with a pencil. Carefully press a bone folder down into the joint and mark the edge of the spine with a pencil. The distance between the two marks is usually ¼", but it may vary a little depending on the book. Set calipers to this width.



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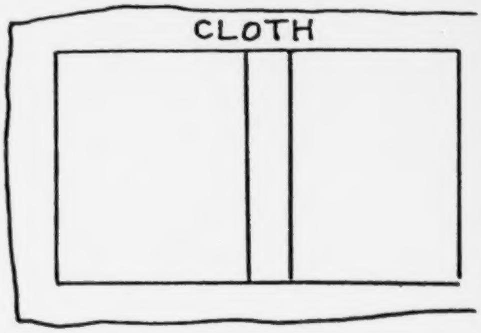
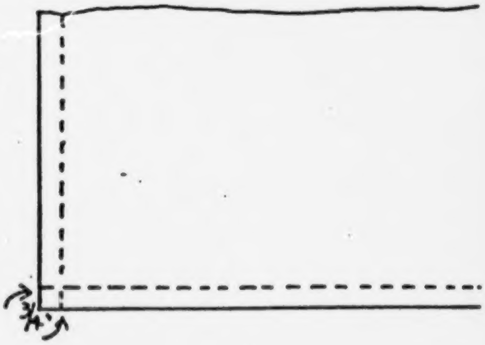
Ohio State

Assembling the Case

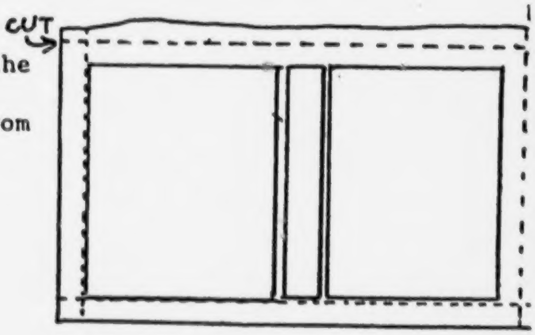
5. Place the boards and spine strip on the cloth. Rough cut the cloth so that it is approximately 2-3" higher than the boards and about 3-4" wider than the three pieces.



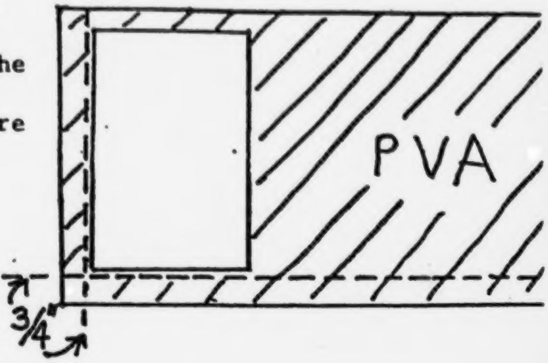
6. Square one corner of the cloth. Draw a vertical and horizontal line 3/4" from the edge of the cloth at the lower left side. These lines will be guide lines when you place the boards in position.



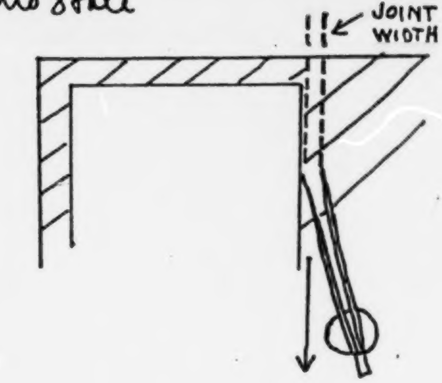
7. Again place the boards and spine bristol on the cloth with space for the joint. Mark 3/4" from the upper and right edge of the board and cut the excess cloth.



8. Apply PVA mixture to the cloth and place the first board in the lower left corner where the lines intersect. Bone the board so that there is good adhesion to the cloth.

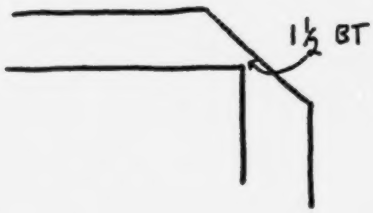


Ohio State



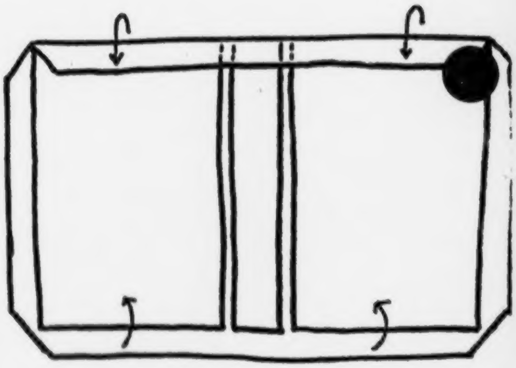
9. Run the caliper down the edge of the board leaving a mark in the adhesive. Place the bristol on the line and flush at the bottom on the guide line.

10. Again run the caliper down the edge of the bristol and lay the second board in place. Bone each piece very well.



11. Cut off the corners of the cloth at a 45° angle, leaving about 1½ board thickness space at each corner.

12. You are ready to turn-in the cloth. Starting at the top, place a strip of waste paper under the cloth and reapply a thin, even coat of PVA if necessary. Remove the waste paper.

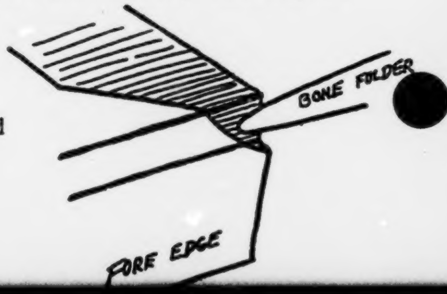


An option at this point is to place a piece of thread that is the width of the bristol at the upper and lower edge of the spine before the turn-in is made. This give the illusion of a headcap and softens the spine.

13. Starting from the left side, place your bone folder under the cloth. Moving to the right, lift the cloth up and over the edge of the board and down onto the board. Work the cloth so that is is tight to the board.

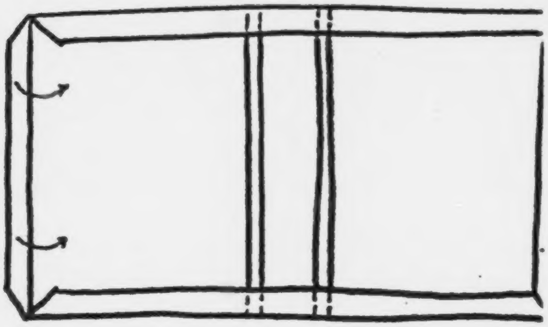
14. Turn case around so that the bottom of the case if now at the top and repeat step 13.

15. Before turning in the foredge, tuck the cloth around the corners with your thumb nails or a bone folder and press into place.

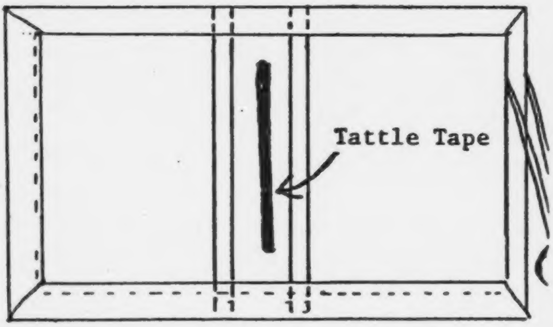


Ohio State

16. Turn in the foredge of each board as explained in steps 12 and 13. Tap the corners with a bone folder to reduce the sharp point and smooth around the corner.



17. Should the width of the turn-ins not be be the same, the wider turn-ins must be trimmed. Set the caliper to the narrowest width. With one point riding on the outer edge of the case mark the correct width all around the case.

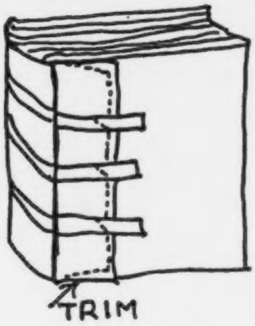


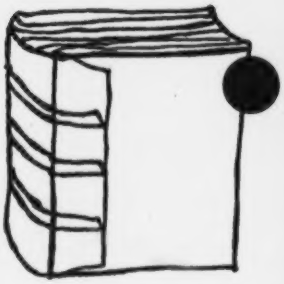
18. Place a metal ruler flush with the caliper line. Cut through with a scalpel. Pull the cloth being trimmed off toward the edge of the case.

19. Manipulate the BB snugly into the cover to check the fit.

Ohio State

Attaching the Cover to the BB



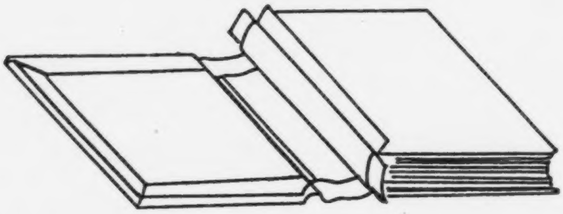


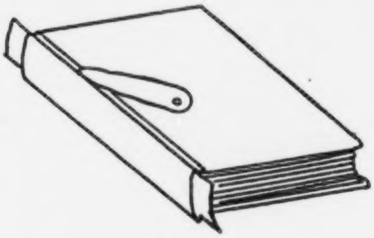
1. Remove tape that holds the protective waste sheets to the BB. Cut the ends of the tapes at an angle. Trim the width of the hinge to approximately 1½" and angle the edges slightly.

2. Put the BB into the cover snugly and place it on a work surface. Open the cover.

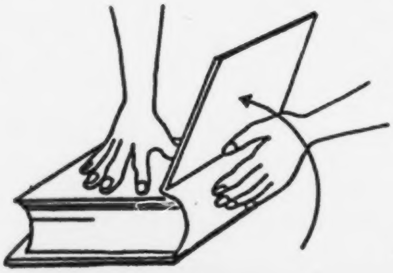
   a. When a hollow tube is on the spine. The tube is affixed to the spine of the new case and dried before the hinges are attached to the inside of the case.

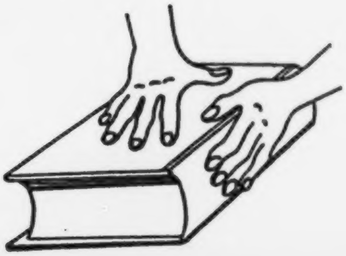
      Apply PVA mixture to the length of the tube (the wax paper must still be inside the tube). Close the book and bone and spine and joint very well. Carefully put the book in a lying press and wrap with an ace bandage. When dry, proceed with attaching the hinges after taking out the wax paper from the center of the tube.





3. Insert waste paper and wax paper under the hinge. Apply PVA mixture to the hinge. Remove waste paper and close book.

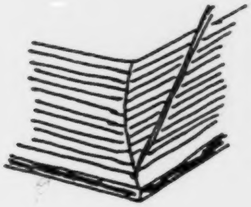


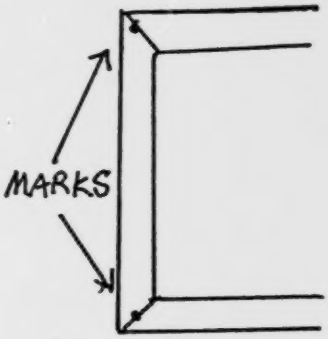


Ohio State

4. Bone the joint of the cover very well. Put book in the nipping press for approximately 5 - 10 minutes. Remove and place on the shelf under a weight over night.

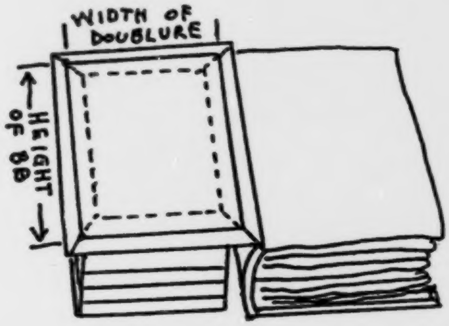
5. The next day measure and cut doublures for inside the front and back cover. To insure the correct measurement of the doublures mark the head and ta corner of the BB on the turn-in of the cover.





6. Use the same paper for the doublures that you used for the endpapers. Measure the height of the BB by the width of the cover from the mark on turn-in to a little less from the board edge by the spine. Remember, when paper is pasted it will expand cross grain.

7. Open the book and support the cover so it perpendicular to the BB. Paste out the doublure with wheat paste and position it from the marks on the turn-ins, smoothing it toward the spine. Bone it through wax then waste paper several times to take out any excess moisture.



8. Inset wax paper. Nip book in the press and then place under a weight overnight or until dry. Stamp author/title label and affix it to spine.

Berkeley

Simple Outline of Preparation for New Case when Original Sewing is Broken (less than 25%)

A. In-house component

1. Remove case mechanically. Save boards.
2. Steam spine clean of old linings and adhesives. Reshape textblock and let dry. Remove old endsheets.
3. Do any paper repairs.
4. Tip on double folio endsheets.
5. Glue on backing flannel. (Sew on tapes with a second lining for large volumes.)
6. Consolidate broken sewing and sew on endsheets.
7. Trim endsheets to exact size.
8. Return volume to booktruck, protected by original boards.
9. Full order (100-150 vols) is sent to Bindery for application of cases.

B. Bindery component

10. Measure book for boards and cloth.
11. Cloth and binding slip sent to stamping room for spine marking.
12. Boards are cut to size. Spine inlay chosen.
13. Make case.
14. Case-in textblock.
15. Hydropress.
16. Quality inspection.
17. Return to Library.

C. Materials Used

- Mohawk Superfine Eggshell 80lb. text for double folio endsheets. Must be able to be processed in Bindery equipment (gluing machines, PVA, presses).
- Heavy backing flannel for super
- Barbour's linen thread (16/2)
- Mohawk Superfine strips for second spine lining (heavy volumes only)
- Linen 1/2" tapes for heavy books
- commercial grade clothes steamers ("Jiffy") for spine cleaning (4 qt capacity)

UC Berkeley
Conservation Department
6/89

PREPARATION FOR NEW CASE ("PREPS")

Tools and Supplies:

small scissors
shears
thread (16/2)
thimble (opt.)
oyster knife
weight (10 lb.)

precut endsheets
glue brush

paper knife
sewing needle
Handiwipes
Jiffy steamer & water tray
PVA
precut backing flannel (super)

bone folder
waste strips

Fill steamer to 3 1/2 qt. level. Preheat until red light goes off, about 10 minutes. Then turn knob to "steam".

Select ten or so volumes from prep truck. Check each binding slip for special instructions and correctness of treatment assigned. Collate books quickly for major losses. Flag the centers of sections adjacent to breaks in textblock, and where paper repair is needed.

1. Cut boards from books. Mechanically clean spines as much as possible without damaging sewing or textblock.

2. Flag broken sections and where paper repair is needed.

3. Steam spine. Protect textblock with board and weight. Moisten spine lining with damp cloth.

   Keep steamer head about 3 inches away from spine, steaming from below the textblock. Scrape softened adhesive with oyster knife. Continue until all lining, super and most adhesive is removed. Turn volume over and repeat on other side if needed.

   Using steam and damp Handiwipe, clean spine of residual adhesive.

   Shape spine while damp to desired round. Adjust any sections that protrude. Stack volumes with their boards in alternating directions to dry under weight.

4. Remove original endsheets.

5. Do any needed paper repairs and guarding of sections. Desired result is that the outer edges of all the folios in the section match.

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(Optional: Glue spine with PVA where sections are loose.)

6. Tip on new endsheets to the textblock: Apply thin line of PVA to textblock at shoulder. Place endsheets at exact shoulder of volume, flush with the head of the volume's title page. Turn volume over and apply back endsheet likewise, flush with the tail of the volume.

7. Glue on super. Select backing flannel at least 3/4" (but not more than 1" wider) wider than spine width. Trim length 1/16" shorter than spine at head and tail.

   Apply PVA to spine and place flannel. Rub flannel well with fingers and bone folder to ensure complete adhesion. Glue flannel to endsheets.

   If volume needs extra support tapes should be used in addition to flannel. Cut two or three linen tapes as long as the flannel is wide. Adhere over flannel at position of sewing stations.

8. Repair sewing structure. Cut thread as long as the height of the volume, times the number of sections to be sewn through, generously. Use existing sewing stations when possible and link stitches between sections. From the center of the textblock working outward, start with a securely attached section adjacent to a loose section. Anchor the loose section to a secure section on the other side. Skip over to the next break and repeat. Finally sew on the endsheet making sewing holes in endsheets to correspond to textblock.

   Do other side of volume. If there are no breaks in the textblock start sewing at the second section (or third, if second is loose) from the front and back. Sew the endsheet folio, linking stitches.

9. Trim endsheets flush with textblock.

10. Seal sewing thread with PVA.

    If extra spine lining is needed (See "Notes on spine lining" handout.) apply a second spine lining of Mohawk Superfine Text paper. Cut a strip the exact width of the spine, grain long. Adhere to spine with PVA. Trim to exact height of spine.

11. Inspect finished prep for quality. Redo or amend any errors. Protect finished volumes with their boards, using elastics.

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12. Initial each finished prep. Place finished work on appropriate booktruck.

Other:

- Choose work from oldest prep truck, from top of truck down.
- Clean head of steamer before putting it away.

PREPS- BASIC OUTLINE

1. CUT COVERS OFF
2. FLAG BROKEN SECTIONS AND PAPER REPAIRS
3. STEAM
4. REMOVE ENDSHEETS
5. DO PAPER REPAIRS
6. TIP ON NEW ENDSHEETS
7. GLUE ON SUPER WITH PVA
8. SEW
9. TRIM ENDSHEETS
10. SEAL THREADS, QUALITY CONTROL
11. REDO ANY ERRORS
12. INITIAL YR WORK, PUT ON COVERS WITH RUBBER BANDS

Conservation Technician Training Session

Preparation for New Case: Quality Control

		Endsheets
Y	N	
[]	[]	Are the folds tipped to the shoulders?
[]	[]	Are the endsheets flush with textblock at head, tail and foredge?
[]	[]	Are the endsheets lightly tipped on, reducing drag on the text?
		Super
[]	[]	Is the super cut to correct height and width?
[]	[]	Is the super squared with the spine, straight and even?
[]	[]	Is the super smoothly and firmly adhered, without air pockets or lifting edges?
		Sewing
[]	[]	Is the sewing tight, snapping when plucked?
[]	[]	Is the sewing clean, i.e., endsheets not torn by thread or needle holes?
[]	[]	Are the sewing holes sealed with PVA, no loose threads?
		Other
[]	[]	Is the paper repair completed (maps hinged, folded, etc.)?
[]	[]	Are pages free of excess adhesive?
[]	[]	Is textblock free of steam or moisture damage?
[]	[]	Does the spine need additional lining?

UC Berkeley 6/89

Selected Bibliography

The following manuals comprise the core literature for collection conservation treatment. Variations on treatments described in this publication are presented in several of them, and other modifications may be developed to adapt to specific problems, for example, by using different materials.

1. Greenfield, Jane. *Books: Their Care and Repair*. NY: H. W. Wilson, 1983.
2. Kyle, Hedi. *Library Materials Preservation Manual: Practical Methods for Preserving Books, Pamphlets and Other Printed Materials*. Bronxville, NY: Nicholas Smith, 1983.
3. Milevski, Robert J. *Book Repair Manual*. Carbondale, Ill.: Illinois Cooperative Conservation Program, 1984.
4. Morrow, Carolyn Clark and Carole Dyal. *Conservation Treatment Procedures: a Manual of Step-by-Step Procedures for the Maintenance and Repair of Library Materials*, 2d edition. Littleton, Colorado: Libraries Unlimited, 1986.
5. *Preservation and Conservation Workshop Manual*. Baltimore, MD: Johns Hopkins University Library, 1987.
6. Young, Laura S. *Bookbinding and Conservation by Hand: a Working Guide*. NY: Bowker, 1981.

REPORT ON "TRAINING THE TRAINERS"

A Conference on Training in Collection Conservation,
UC Berkeley, April 28 - May 2, 1992

This report summarizes the activities undertaken and decisions reached by a group of collection conservators and preservation administrators interested in providing regional training in collection conservation (care and repair of general circulating collections). The conference included 42 participants, representing 22 libraries throughout the country. Libraries were selected on the basis of geographic distribution and on their commitment to collection conservation, including a commitment to serve as a regional training site. (See Attachment 1: List of Participants.) Funding for the conference was provided by the National Endowment for the Humanities, Office of Preservation and Access.

The conference had three goals: to develop model plans for training technicians in collection conservation; to develop management and funding plans for regional implementation of collection conservation training; and to provide opportunities for professional development for collection conservators. To achieve these goals, eight tasks (Attachment 2: Goals and Tasks) were undertaken to facilitate discussion and consensual decision-making. Several group process techniques were used, and staff from the ARL Office of Management Services coached the conference staff and helped facilitate the conference.

Toward the first goal, outlines for plans for training technicians in collection conservation were completed, including training objectives, audiences for the training, curricula and supporting documentation, and teaching resources.

Toward the second goal, management and funding plans for implementation of regional training were explored and roughly sketched out, including estimates of training costs, funding needs, institutional interests, and ad hoc groups of libraries to work together in several geographic regions.

Toward the third goal, tasks and discussions were organized to provide formal and informal professional development opportunities. Conservators worked together, engaging in a group discussion on the scope of the collection conservation field, spending a day exploring teaching techniques in collection conservation, reviewing documentation developed by many of the participating institutions to support collection conservation programs, and brainstorming on the future needs of collection conservation.

The conferees accomplished a great deal in the five conference days, moving from task to task, systematically making progress toward all of the conference goals. By the end of the conference the entire agenda was completed, the goals were achieved, and follow-up activities were assigned to volunteers. Judging from the accomplishments of the conferees documented in this report and the opinions expressed on the conference evaluation forms, major progress has been made toward meeting the urgent need for trained general collection conservation technicians in the nation's research libraries.

Further, with the development of this conference model to address a particular preservation need shared by many research libraries, the preservation field has at its disposal a successful method to address other shared preservation problems and to build consensus toward their resolution.

Goal 1: Model Plans for Training in Collection Conservation

The conferees worked in several different configurations of participants designed to facilitate work toward each of the goals. Some tasks were addressed by collection conservators without preservation administrators (and vice versa); others were addressed by the all conferees, working together. Sometimes small task groups were formed to facilitate discussion when many differences of opinion could be anticipated; other times task groups were formed with members from the same geographic region to facilitate regional planning.

The first discussion toward achieving the goal of model plans was to identify objectives, audience, and length of training needed to meet the objectives. Three models were explored and ultimately adopted in recognition of the different and complementary objectives and audience designed for each (Attachment 3: Training Objectives and Audiences).

The first model is short-length training of one to five days designed to introduce preservation both to technicians and to non-preservation library staff. Additional applications of this model (but not pursued during the conference) are intense, narrowly focussed workshops for practicing conservation technicians and refresher courses in various aspects of collection conservation. Advantages of the model include training relatively large numbers of staff in one session, minimizing training costs per person, and providing short courses able to "stand alone" without follow-up.

The second model, for medium-length training of two to four weeks, has as its audience practicing conservation technicians and as its primary objective a comprehensive overview of the scope of the technician's work, including the role of collection conservation in the institution's preservation program. Advantages of this model include smaller classes than the short model, more time for practice of techniques and, assuming the institution sends the technician on work time, an institutional commitment considerably greater than necessary for participation in the short model.

The long model, with six months (or more) training, has as its primary audience practicing technicians with potential for high skill development and possible subsequent service as trainers of other conservation technicians. The objectives articulated for this training model are high skill competency, judgement, comprehensive training, knowledge of methods to integrate the collection conservation program into the overall preservation program, and development of teaching skills. This model would be limited probably to one trainee at a time per institution and would anticipate a major commitment of the trainee's institution to the cost of training and to institutional program development in collection conservation.

Following this discussion, the collection conservators undertook Task 1 to identify the scope of the collection conservation field. The purposes of this task were to provide the collection conservators with an opportunity to appreciate the breadth of the field and the large variation in range of job assignments among collection conservators. The second purpose was to create a list (Attachment 4: Scope of Collection Conservation) from which to select those areas of responsibility most likely to be included in job descriptions and training for conservation technicians.

Task 2 was to select from the scope list those topics to be included in training, assuming sufficient training time. Topics identified by the largest number of collection conservators as essential for a training program were recorded and subsequently supplemented with suggestions from the preservation administrators. (Attachment 5: Curriculum Topics and Techniques for Conservation Technician Training).

Task 3 was to select from the curriculum topics those that could be addressed within the training time available for the short, medium, and long training models, keeping in mind the objectives and audiences for each model. Collection conservators and preservation administrators worked together in small groups and to select topics and techniques for training. The small groups had wide-ranging ideas about the curriculum for each length model, but the degree of overlap among the recommendations was remarkably higher overall than originally anticipated by many of the conferees. (See Attachment 6: Curricula for the Short, Medium, and Long Training Models.)

Task 4 was to develop training plan designs for each of the models. Working in groups with members selected on the basis on the model of greatest interest to their institution, each group reviewed the curriculum recommendations and length of training plan, recommended a training schedule (continuous or intermittent, resident or at home), number of trainees per session, number and position of instructors, and facilities needed for training. (See Attachment 7: Training Plan Designs.)

Following design of the training plan, the conservators turned their attention to the documentation needed to support the training plans. The purpose of Task 6 was to review, evaluate and reach consensus on the documentation to include in a resource notebook for regional training. Additionally, areas were identified where new or revised documentation would be needed to fill in gaps. To prepare the conservators for this task, large numbers of documents were submitted by the conservators in advance of the conference for review by their colleagues. The documents were grouped by treatment type into 17 binders, all of which were reviewed and commented upon by all the conservators. Many of the conservators worked through lunch breaks and into the evenings during the first three days of the conference.

Over the course of a day's work in small task forces and in group discussion, all of the objectives of the task were addressed and decisions were made. Many of the conservators volunteered to contribute information to fill gaps and to work on revisions to make the resource notebook important for the training programs. The notebook is to be completed by the end of the project and submitted to the Association of Research Libraries, Office of Management Services, for distribution.

Goal 2: Management and Funding Plans for Regional Training

Task 5 was to develop funding plans based on the outlines of the training plans created in Task 4. This assignment fell to the preservation administrators working in the same groups as assembled for Task 4, but without the assistance of the collection conservators, who were addressing another task. Using blank budget forms, each group addressed all budget components for a training program and estimated costs. The groups also identified elements of the training that could be used as institutional cost share, and identified components of the budget for which external funding would be essential as well as components more likely to receive institutional support if external funding proved to be unavailable.

The results of Task 5 are reported in Attachment 8: Funding Plans. Much discussion ensued with regard to the costs of training with all of the models, and the costs of one model relative to another. Data on already funded projects indicated comparable costs per trainee, thus confirming the realistic, if high, costs of training. Discussion of the merits of continuing with all three plan models led to the conclusion that the three plans are complementary, both in objectives and audiences; together they meet the several needs of research libraries in all geographic areas of the nation. Simplifying a nationwide conservation technician training program to only one model would mean not meeting the greatest needs of some libraries and not meeting the needs of geographic areas where levels of development in collection conservation are different from other areas of the nation.

To address regional approaches to management of cooperative training programs, the conferees carved up the nation into ad hoc training regions in order to take advantage of existing organizations or working relationships among institutions that could facilitate the management of regional training programs. Further, the institutions within each of these regions were polled to determine which of the institutions were interested in a cooperative approach to training and which of the training models might be developed for the region. The results of the poll are recorded as Attachment 9: Training Regions and Possible Institutional Training Sites.

The regional groups then proceeded with Task 7, the development of regional management plans. The groups addressed several questions, including implementation of more than one plan, the nature of institutional cooperation, recruitment of trainees, regional funding sources, preparation of project documentation, regional leadership and institutional overhead expenses, and regional program evaluation. Some training regions were able to outline a plan very quickly; other regions had more difficulty. Attachment 10 includes notes on management plans for training in several regions.

Not every region had more than one institution representing it; the southwest and northwest, exclusive of California, had only one representative each, thus making cooperative planning for them impossible during the conference. Follow-up planning for both regions, including the possibility of combining northwest, southwest, and California into one gigantic region for training purposes, will need to be pursued.

The final task in connection with regional management and funding plans was to brainstorm on the justification for the training plans developed during the conference. The decisions taken and plans designed require considerable work and resources to implement and, therefore, must be well justified. Attachment 11 is a list of points of justification, reflecting the wide range of thinking of the conferees. The list provides several important reasons to pursue as soon as possible training for technicians in collection conservation, to pursue a nationwide program with cooperative regional implementation, and to support the three training models required to meet the different needs among research libraries and geographic areas.

Goal 3: Professional Development for Collection Conservators

In addition to the many informal opportunities for collection conservators to exchange views on their work, formal opportunities included development of the training plans and a resource notebook of documentation for technicians in collection conservation, training in training techniques (provided by the ARL Office of Management Services), and a final session in the conference devoted to brainstorming on future needs in collection conservation.

Several concerns about collection conservation surfaced during the development of technician training plans that, though out of scope for technician training, are of importance to the field of collection conservation. To keep track of these ideas, a list was created and maintained throughout the conference, called the "parking lot." Attachment 12 includes the ideas that found their way to the parking lot, but did not get formal attention during the conference.

The final brainstorming session took advantage of a question on the evaluation form (filled out by conferees earlier in the day) to record ideas expressed about future needs in the collection conservation field. These, and other ideas that surfaced during brainstorming, are recorded in Attachment 13.

Follow-up Actions

In addition to the assignments to conservators to revise and/or add to documentation, and to administrators to pursue regional management plans, there remained at the end of the conference several actions to take.

The conferees felt that NEH should be briefed on the outcome of the conference and requested to comment on the role NEH might play in a national training program. By way of this report, UC Berkeley took that responsibility, and hopes to report back to the conferees by mid-summer.

To keep all conferees informed of developments in a nationwide training program, the University of Florida offered to serve as an information clearinghouse, both via email and through distribution of documents by facsimile or USPS, as needed.

To determine how well the models developed by the conferees address the needs of the nation's research libraries after their implementation, the ALA Collection Conservation Task Force agreed to assume responsibility to track progress of training projects. The Task Force will evaluate the success of models and make suggestions for adjusting or restructuring efforts to meet training needs.

The proceedings of the conference and the treatment documentation will be completed by the end of June 1993 and submitted to ARL/OMS for distribution. UC Berkeley accepted this task as part of completion of the "Training the Trainers" project.

Barclay Ogden
Conservation Department
UC Berkeley Library
18 May 92

Attachments.

30jun93a

Attachment 1: List of Participants

Training the Trainers
Conference on Collection Conservation
28 April - 2 May 1992

BRIGHAM YOUNG UNIVERSITY
Randy Silverman
James Fairbourn

COLUMBIA UNIVERSITY
Janet Gertz
Frederick Bearman

CORNELL UNIVERSITY
John Dean
Judi Clark

EMORY UNIVERSITY
Debra McKern
Ann Frellsen

HARVARD UNIVERSITY
Lisa Biblo
Nancy Schrock

INDIANA UNIVERSITY
Lorraine Olley
James Canary

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Jennifer Banks
Mary Pat Bogan

NEW-YORK HISTORICAL SOCIETY
Duane Watson
Roberta Pilette

NORTHWESTERN UNIVERSITY
Richard Frieder
Scott Kellar

OHIO STATE UNIVERSITY
Harry Campbell

OHIO UNIVERSITY
Patricia Smith
Susan Lunas

PRINCETON UNIVERSITY
Robert Milevski
Brian Baird

SAN FRANCISCO PUBLIC LIBRARY
David McFarland

STANFORD UNIVERSITY
Eleanore Stewart

UNIVERSITY OF CALIFORNIA, BERKELEY
Barclay Ogden
Lynn Jones

UNIVERSITY OF CALIFORNIA, DAVIS
Wendy Jones

UNIVERSITY OF CINCINNATI
Toby Heidtmann
Virginia Wisniewski

UNIVERSITY OF CONNECTICUT
Jan Merrill-Oldham
Carole Dyal

UNIVERSITY OF FLORIDA
Erich Kesse
John Freund

UNIVERSITY OF MICHIGAN
Carla Montori
Maria Grandinette

UNIVERSITY OF WASHINGTON
Gary Menges
Kate Leonard

YALE UNIVERSITY
Marcia Watt
Gisela Noack

Gary Frost
Booklab, Inc.

Susan Jurow
Association of Research Libraries

Attachment 2: Goals and Tasks

Goal 1: Model Plans for Training in Collection Conservation

Task 1. Scope of Field

Task 2. Curriculum Topics

Task 3. Developing Curricula for Short, Medium, and Long Training

Task 4. Training Plan Designs

Task 6. Documentation for Resource Notebook

Goal 2: Management and Funding Plans for Regional Training

Task 5. Funding Plans

Task 7. Regional Management Plans

Task 8. Justification for Training Plans

Goal 3: Professional Development for Collection Conservators

Training Skills Workshop (ARL/OMS)

Future Needs in Collection Conservation (discussion)

Attachment 3: Training Objectives and Audiences

Short-length Plan (1-5 days)

Objectives:	public relations / outreach introduction to preservation intense workshops with narrow focus refresher courses
Advantages:	lower per person cost per event would not require follow up for some objectives
Audience:	technician supervisors skilled technicians non-preservation personnel (for pr/outreach)

Medium-length Plan (2-4 weeks)

Objectives:	training where follow-up is essential comprehensive overview of field for technicians training in integration of collection conservation into the preservation program
Advantages:	small groups greater commitment from institution than for short model
Audience:	practicing conservation technicians

Long-length Plan (6+ months)

Objectives:	skill competency judgement comprehensive training training in integration of collection conservation into the preservation program teaching skills
Advantages:	greatest institutional commitment
Audience:	practicing conservation technicians with potential for high skill development and service as trainers

Attachment 4: Scope of Collection Conservation

COLLECTION CONSERVATION: SCOPE OF THE FIELD

Professional Development
- keeping up with new information
- networking
- history and overview of the field
- professional recognition and participation in the field

Program Management
- workflow management
- dealing with vendors
- decision making guidelines
- providing technical expertise and advice
- how the department fits in with the institution
- statistics & record keeping
- hiring and training of personnel
- designing and maintaining facilities to do repair
- productivity
- prioritization for treatment
- grant writing/fund raising
- knowing where to get outside expertise/assistance
- providing information to public and staff

Preservation
- effective security systems
- disaster preparedness and response
- insect control
- control of food and drink
- surveying for preservation needs
- CC supports other preservation activities, e.g., binding preparation
- book handling information
- stabilizing the environment
- building design for preservation of collections
- reformatting
- recommendations re:off-site storage
- shipping standards

Treatment
- development of standards of treatment (in-house and contract)
- commercial binding specification
- creative problem solving
- enclosures
- provide quick treatment
- preventive maintenance
- tailoring treatments to the use of the collection
- comprehensive variety of treatment
- stack maintenance

* CC makes library materials more accessible
* exhibit standards and preparation
* structure and chemistry of collections
* aesthetically pleasing treatments
* basic repair
* rebinding
* encapsulation
* deacidification
* documentation of treatments
* knowing the limitations of one's knowledge/specialty

Institutional information

* history of the institution
* understanding bibliographic information

Attachment 5: Curriculum Topics and Techniques for Conservation Technician Training

(Items in parentheses suggested by preservation administrators after conservators had developed list.)

DISASTERS

- Familiarity with existing plans
- Training in salvage techniques
- Preparation for renovation or construction of buildings
  - (moving items, covering areas)
- Knowledge of supplies
- Knowledge of procedures for dealing with insect infestations

TREATMENT

- Repair
  - Japanese paper repair w/various adhesives
  - Paper repair w/ archival tape, heat set tissue, etc.
  - Tip ins, single and multiple
  - Hinging in material or pages
  - Opening unopened/uncut pages (circ. materials)
  - Flattening pages, mist or damp blotter or iron
  - Spine repair
  - Rebacking
  - Rebacking with regluing spine, new ends, boards detached
  - Hinge tightening
  - Hollow tubes
  - Preparation for new case
  - (tape removal, leather consolidation, interleaving, deacidification)
- Rebinding
  - Resewing on tapes
  - Resewing with sawn-in cords
  - Partial resew
  - Unstructured sewing
  - New case
  - Recasing
  - Temporary binding of paperbacks
  - Cover-ups
  - (split board binding)
- Enclosures
  - Pamphlet binding, sewn or wire stitched
  - Pamphlet binding with pocket
  - Encapsulation
  - Phase boxes
  - Wrappers
  - Portfolios
  - Quarter folios
  - (polyester jackets, clamshell boxes, shrink wrap)
- In-house binding (for incomplete periodicals)
  - Tack bind
  - Velo-bind

  - Hot melt
  - Sew through the fold
- (Mold and mildew cleaning)
- (Refurbishing)

CARE AND HANDLING

- Shelving
- Photocopying
- Bookdrops
- Booktrucks
- Avoiding paper clips, tape, inserts
- Food and drink
- Users marking books
- Providing book bags at circulation points
- Handling non-book formats
- Exhibit preparation
  - appropriate exhibition materials for books, flat objects
  - how to build/buy supports
  - light requirements
  - security
  - matting and mounting
  - how to caption/identify materials

STACK MAINTENANCE

- Lighting
- Housekeeping
  - dusting
  - vacuuming
  - no smoking
- Book supports, proper shelving
- Environmental standards and monitoring
  - lights
  - temperature, humidity

PREVENTIVE MAINTENANCE

- Identifying problems (i.e., acq, cat, gifts)
- Identifying options for treatment and how to prioritize (all repair techniques might apply)

DECISIONS

- Materials' composition and working properties
- Analyze book's structure: identify problems
- Battery of techniques (incl. enclosures)
- Apply institutional options
  - Factor in use, artifactual value, storage, in-house vs. commercial options, type of institution, skills of technicians, availability of equipment.
  - Guidelines for decision-making; where in work-flow the preservation decisions are made, feedback loops, guidelines

    - for value (librarian-developed, e.g., date of imprint, RLG "Book as Object")
- Possible training methods
    - Review damaged books and choose appropriate repair technique based on type of library.
    - Have technicians identify types of damaged book structures.
    - Types of archival materials: books, mss, photos.
    - Flow charts (reviewing documentation of training institutions).
    - If a preservation administrator, have him/her come for maybe a half day.
    - Introduction to other options: library binding, reformatting, weeding, replacement.

WORK FLOW MANAGEMENT

- Workflow
    - Sources of material
        - identify source
        - interaction with staff
        - prioritization based on library's needs
    - In-lab (sorting) decision-making
        - selection of treatments
        - scheduling, pacing, priorities, rushes
        - routing: putting in the right chutes
    - Treatment progress
        - physical organization of lab
        - workbenches, tools, other equipment
    - Inspection and dispersion
        - return to proper department/library
        - possibly reject and redo
- Productivity
    - Expectations, times, rates
    - Statistics (what's being done, how to measure)
    - How to be productive: batch treatments, proper materials, equipment, supplies-- and sources for purchase.
- Documentation: standardization of treatment, statistics
- (Costs)
- (Inventory control)

Attachment 6: Curricula for Short, Medium, and Long Training Models

Short model for conservation technicians

(a selection of the following for narrowly focussed workshops)

- Orientation*
- Care and handling
- Stack maintenance
- Workflow*
- Treatment decision-making*
- Pamphlet binding
- Book repair (simple)*
- Paper repair (simple)*
- Textblock-to-case attachment*
- Enclosures*
- Disaster salvage
- Mold/insect treatment
- Materials/ book structure*
- Library binding
- Follow-up resources

Medium model for conservation technicians

(as many of the following as possible)

- Needs assessment*
- Book structure / blank book*
- Care and handling / exhibits*
- Stack maintenance*
- Disaster planning*
- Treatment options*
- Repair techniques (minor)*
- Decision-making*
- Enclosures*
- Repair techniques (complex)*
- Paperback treatments
- Pamphlet binding*
- Work flow / batching*
- Facilities design*
- Statistics
- Photocopying
- Tip-ins
- Clinic for problem-solving
- Site visit to participant's institution

Long model for conservation technicians

Same as medium with much more emphasis on:

- development of skill competency
- development of management skills
- development of teaching skills

* Asterisked items were repeatedly emphasized as essential.

Attachment 7: Training Plan Designs

Short model

Length: 5 days
Schedule: continuous
Audience: Repair technicians
# participants: 10
Resident: yes
Instructors: 1 collection conservator
Facilities: studio space, not necessarily a lab

Medium model

Length: 4 weeks
Schedule: continuous, or 2+2 if travel allows
Audience: Repair technicians
# participants: 2
Resident: yes
Instructors: collection conservator, pres. administrator
Facilities: lab space plus tools and supplies to trainees

Long model

Length: 6 months preferred; 4 mo. min., 12 mo. ideal
Schedule: continuous
Audience: Repair technicians
# participants: 1
Resident: yes, possibly at several training sites
Instructors: collection conservator, pres. administrator, and others, drawn from region
Facilities: lab space plus tools and supplies to trainees, facilities at home institution

Attachment 8: Funding Plans

NB: All cost figures vary widely among institutions. The primary value of the following information is to determine how costs could be distributed among sources of support and to rough out the cost components and their order of magnitude. Some of the figures have been modified following the conference to achieve comparability among all three models while attempting to save the original intent of the funding models.

Budget component	Outside $$	Cost share
Short model		
Salaries and Benefits		
PA @ 2.5% x 6 mo.	750	
Coll. conservator @ 10% x 6 mo.	1500	
Trainees (10 total)		6250
Travel		
Transportation	2000	
Meals/lodging (75x5x10)	3750	
Supplies (and sm. tools)	1500	
Printing and copying	400	
Total direct costs	9900	6250
Medium model		
Salaries and Benefits		
PA 5% x 6 mo.		1500
Coll. Cons. 10% x 6 mo.		1500
Technician 10% x 6 mo.		1250
Trainee 10% x 6 mo. (x2)		2500
Substitute Technician	12500	
Travel		
Transportation (trainees, bosses, site visits)	1200	
Meals/lodging (75x26x2)	3900	
Supplies (incl. sm. tools)	1000	
Printing and copying	200	
Total direct costs	18,800	6750

Long model

Salaries and Benefits		
PA 12.5% x 6 mo.	3750	
Coll. Cons. 50% x 6 mo.	7500	
Technician 10% x 6 mo.	1250	
Trainee 100% x 6 mo.		12500
Travel		
Trans. (trainee @ 3 trips and 1 site visit)	1600	
Meals/Lodging (6 mo.)	5400	
Supplies (incl. sm. tools)	600	
Printing and copying	500	
Equipment		5000
Total direct costs	20600	17500

Summary of Funding Plans

	short	medium	long
time	5 days	4 weeks	6 mo.
# parts.	10	2	1
ttl. dir cost	16,150	25,550	38,100
cost share	6,250	6,750	17,500
cost/part.	1,615	12,775	38,100
cost/part/wk	1,615	3,192	1,588

Who Pays for What

- Host
  - facility (capital investment)
  - PA (medium only)
  - technician (except long model)
  - mentoring following training
- Trainee Institution
  - salary and benefits of trainee and trainee supvr.
  - equipping a facility at home institution
- Outside Sources
  - trainee travel
  - small tools/supplies
  - compensation for trainer
  - follow-up travel by trainer
  - office support

Attachment 9: Training Regions and Possible Institutional Training Sites

Region	Institutions	Plan Length	Indiv/Coop.
New England	Harvard	L	I/C
	MIT	M	C
		L	C
	Yale	M	C
		L	C
	Connecticut	L	C
New York	Cornell	M	C
		L	C
	New York Hist.	M	C
		L	C
	Columbia	L	C
Southeast	Emory	L	I/C
	Florida	M	I/C
Midwest	Northwestern	S	C
		M	C
		L	C
	Indiana	M	I/C
	Michigan	M	C
		L	C
	Ohio U.	M	C
		L	C
	Cincinnati	M	C
	U. Ohio	?	?
Northwest	U. Washington	S	?
Southwest	Brigham Young	L	?
California	Stanford	L	?
	Sanfrancisco PL	?	?
	UC Davis	S	?

Attachment 10: Notes on Regional Management Plans

New England

Jennifer Banks, leader
use opportunity to help train collection conservators
use all three models
NEH the probable agency
Harvard possibly the lead institution
3 year project
June 93 proposal deadline

New York

Janet Gertz, leader
New York state pres grants a possible source
use the long model (for big 11)
1+ years for the project
Columbia to prepare proposal for long model
Cornell continues medium model
February 93 proposal deadline

Mid Atlantic

Robert Milevski/Debra McKern, leaders
investigate Johns Hopkins model
medium length probably
need for proposal not clear

Southeast

Erich Kesse, leader
medium (Fla) and long (Emory) models
Solinet, Georgia Archives to be involved
3-year project
NEH probable agency, but several possible funders
June 93 proposal deadline

Midwest

Carla Montori/Richard Frieder, leaders
CIC probable org., but must include non-CIC participants
do a market survey
all three plans
proposal by CIC task force
several potential funding sources
3-year project
June 93 proposal deadline (probably)

Southwest

Randy Silverman/Gary Frost, leaders
Brigham Young, Booklab, UT Austin, involved
Amigos to coordinate?

short model of greatest interest
do a market survey

West

Maria Grandinette, leader
include Northwest states
SF Public Lib, Stanford, UC Davis, UC Berkeley involved
do a market survey
2-year project
June 93 proposal deadline (probably)

Attachment 11: Justification of Training Plans

Scholarly access/several places (improves service-ILL)

Creates nationwide training plan/standards

Funds training, not treatment

Leads to cost/effective treatment, better decision-making, upgrades preservation program

Better materials, longer life

Includes needs assessment and market survey

Has coordinated evaluation (both before and after projects)

Improves interlibrary cooperation

Requires institutional commitment; establishes or enhances preservation programs

Preserves materials acquired with federal funds

Non-duplicative of other training programs

Complements microfilming activities

Includes contributions from small and medium-sized libraries

Has a multiplier effect: trainees become trainers

Has an efficiency of scale (docs./proposals/curricula)

Utilizes the power of regional implementation: networking, mentoring, builds on existing organizations, minimizes travel, responds well to potential trainer institutions' needs to provide services in their regions

Attachment 12: Parking Lot

1. Classification of technicians.
2. Career path for technicians and collection conservators.
3. Definition of collection conservation; special vs. general collections.
4. Meeting the needs of non-paper based collections.
5. Internships for collection conservators.

Attachment 13: Future Directions for Collection Conservation

Documentation of treatments for collection conservation; the need for a collection conservation "manual"

Training for collection conservators: supervisory/management, becoming a better trainer, internships in conservation treatment

Definition of collection conservation/conservator

Career path for collection conservators

Development of standards for treatment (in-house and commercial)

Continuation of a collection conservators' group: 1) for continuing work with pa's, 2) for ongoing networking and information exchange

Need to raise profile of collection conservation in national organizations (e.g., AIC, ALA, others?)

Ongoing development of new commercial products needed in collection conservation